

# The Second Annual DCoE Trauma Spectrum Disorders Conference A Scientific Conference on the Impact of Military Service on Families and Caregivers **Conference Proceedings**

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## THE SECOND ANNUAL DCoE TRAUMA SPECTRUM DISORDERS CONFERENCE: A SCIENTIFIC CONFERENCE ON THE IMPACT OF MILITARY SERVICE ON FAMILIES AND CAREGIVERS

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# Sponsoring Organizations



## ACRONYMS

ANG	Air National Guard
ARNG	Army National Guard
AUD	Alcohol Use Disorders
AUDIT	Alcohol Use Disorders Identification Test
BAI	Beck Anxiety Inventory
BDI	Beck Depression Inventory
BIFI	Brain Injury Family Intervention
CAPS	Clinician Administered PTSD Scale
CBCL	Child Behavior Checklist
CBCT	Cognitive-Behavioral Conjoint Therapy
CBT	Cognitive Behavior Therapy
CDI	Children's Depression Inventory
CES-D	Center for Epidemiologic Studies Depression Scale
CT	Computed Tomography
DAS	Dyadic Adjustment Scale
DAST	Drug Abuse Screening Test
DHHS	Department of Health and Human Services
DoD	Department of Defense
FACES	Family and Caregiver Experience Survey
FACES II	Family Adaptability and Cohesion Evaluation Scale, Version II
FAM-III	Family Assessment Measure, Version III
FC	Family Consultation
FOCUS	Families OverComing Under Stress
FPE	Family Psychoeducation
FREEDOM	Focus, Recognize, Emotion, Evaluate, Define, Options, and Make a contribution
GCS	Glasgow Coma Scale
GCU	General Care Unit
HHS	Department of Health and Human Services
HOME	Home Observation for Measurement of the Environment
HRSA	Health Resources and Services Administration
IED	Improvised Explosive Device
IOM	Institute of Medicine
IPV	Intimate Partner Violence
MC&FP	Military Community and Family Policy
MH	Mental Health
MHAT	Mental Health Advisory Team
MHF	MilitaryHOMEFRONT
MIRECC	Mental Illness Research Educational and Clinical Center
NIH	National Institutes of Health
NINR	National Institute of Nursing Research
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
PCL	PTSD Checklist
PCL-C	PTSD Checklist-Civilian Version

## Sponsoring Organizations



PCS	Parental Concerns Scale
PDHRA	Post Deployment Health Re-Assessments
PH	Psychological Health
PHQ	Patient Health Questionnaire
PICU	Pediatric Intensive Care Unit
PRC	Polytrauma Rehabilitation Center
PRIME-MD	Primary Care Evaluation of Mental Disorders
PSI	Parenting Stress Index
PSS	Parental Stressor Scale: Pediatric Intensive Care Unit
PT	Polytraumatic
PTSD	Posttraumatic stress disorder
QIC	Quality Improvement Collaborative
R/NG	Reserve/National Guard
RCT	Randomized Controlled Trial
REACH	Reaching out to Educate and Assist Caring, Healthy Families
RINGS	Readiness and Resilience in National Guard Soldiers
SASSI	Substance Abuse Subtle Screening Inventory
SAT	Strategic Approach Therapy
SF-36V	Short Form Health Survey for Veterans
STAI	State-Trait Anxiety Inventory
STARRS	Study to Assess Risk and Resilience in Service Members
SUD	Substance Use Disorder
TAP	Trauma Assessment Pathway
TARGET	Trauma Affect Regulation: Guide for Education and Therapy
TBI	Traumatic Brain Injury
TIPEP	Trauma-Informed Personal Empowerment Programs
TREM	Trauma Recovery and Empowerment Model
TSCC	Trauma Symptom Checklist for Children
TSCYC	Trauma Symptom Checklist for Young Children
TSD	Trauma Spectrum Disorders
TSI	Trauma Symptom Inventory:
USAFR	United States Air Force Reserve
USAR	United States Army Reserve
USMCR	United States Marine Corps Reserve
USNR	United States Navy Reserve
VA	Department of Veterans Affairs



### SPONSORING ORGANIZATIONS

#### DEFENSE CENTERS OF EXCELLENCE FOR PSYCHOLOGICAL HEALTH AND TRAUMATIC BRAIN INJURY (DCOE)



In November 2007, Deputy Secretary of Defense, the Honorable Gordon England, announced the opening of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury. The DCoE leads a collaborative effort toward optimizing psychological health and traumatic brain injury treatment for the Department of Defense (DoD). Partnering with the Department of Veterans Affairs (VA) and an extensive network of collaborators, the DCoE supports a holistic approach committed to the establishment of best practices and quality standards for leadership intervention; comprehensive outreach (service member, family, unit and community); education and training; resilience and prevention; clinical care; telehealth connectivity; program excellence; and relevant research. It is responsible for leading and orchestrating a national collaborative network of military, federal, family, and community leaders, advocacy groups, clinical experts, and academic institutions to best serve the urgent and enduring needs of Warriors and their families with psychological health and/or traumatic brain injury concerns.

#### NATIONAL INSTITUTES OF HEALTH (NIH)



The National Institutes of Health (NIH), a part of the U.S. Department of Health and Human Services, is the primary Federal agency for conducting and supporting medical research. Helping to lead the way toward important medical discoveries that improve people's health and save lives, NIH scientists investigate ways to prevent disease as well as the causes, treatments, and cures for common and rare diseases. Composed of 27 Institutes and Centers, the NIH provides leadership and financial support to researchers in every state and throughout the world. For over a century, the NIH has played an important role in improving the health of the nation. The NIH is the steward of medical and behavioral research for the Nation. Its mission is science in pursuit of fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to extend healthy life and reduce the burdens of illness and disability.

#### DEPARTMENT OF VETERANS AFFAIRS (VA)



The Department of Veterans Affairs (VA) was established on March 15, 1989, succeeding the Veterans Administration. It is responsible for providing federal benefits to veterans and their families. The VA is the second largest of the 15 Cabinet departments and operates nationwide programs for health care, financial assistance, and burial benefits. About a quarter of the nation's population, approximately 74.5 million people, are potentially eligible for VA benefits and services because they are veterans, family members, or survivors of veterans. The VA's fiscal year 2007 spending was over \$80 billion, including \$34.9 billion for health care and \$41.5 billion for benefits.

Perhaps the most visible of all VA benefits and services is health care. From 54 hospitals in 1930, the VA's health care system now includes 155 medical centers, with at least one in each state, Puerto Rico, and the District of Columbia. The VA operates more than 1,400 sites of care, including 872 ambulatory care and community-based outpatient clinics, 135 nursing homes, 45 residential rehabilitation treatment programs, 209 Veterans Centers, and 108 comprehensive home-care programs. Providing a broad spectrum of medical, surgical, and rehabilitative care, the VA has experienced unprecedented growth in

## Sponsoring Organizations



the medical system workload. Over the past few years, the number of patients treated increased by 29 percent from 4.2 million in 2001 to nearly 5.5 million in 2007.

The VA also manages the largest medical education and health professions training program in the United States, training about 90,000 health professionals each year, with affiliations with 107 medical schools, 55 dental schools, and more than 1,200 other schools across the country. The VA Research and Development program—an intramural program located within the VA health care system—has served as the foundation for advancements in veterans' health care for over 60 years. VA research currently supports more than 3,000 active investigators and support staff at more than 100 sites across the nation, and its career development program is helping to train America's next generation of health researchers.

The VA Research program, unique in that it is the only research program focused wholly on conducting groundbreaking research to meet the full spectrum of veterans' health care needs, has earned an international reputation for excellence in areas such as aging, chronic disease, prosthetics, and mental health. Because 7 in 10 VA researchers are also clinicians, the VA is uniquely positioned to translate research results into improved patient care. The VA Research program embraces its close affiliations with academic institutions and fosters strong collaborations with federal agencies and others to accelerate the translation of research to application and strengthen the programs' national health impact.

### HEALTH AND HUMAN SERVICES (HHS)



The Department of Health and Human Services (HHS) is the United States government's principal agency for protecting the health of all Americans and providing essential human services, especially for those who are least able to help themselves.

The department includes more than 300 programs, covering a wide spectrum of activities. Some highlights include: health and social science research, preventing disease, including immunization services, assuring food and drug safety, Medicare, health information technology, financial assistance and services for low-income families, improving maternal and infant health, Head Start, faith-based and community initiatives, preventing child abuse and domestic violence, substance abuse treatment and prevention, services for older Americans, including home-delivered meals, comprehensive health services for Native Americans, and medical preparedness for emergencies, including potential terrorism.

The HHS represents almost a quarter of all federal government outlays, and it administers more grant dollars than all other federal agencies combined. The HHS Medicare program is the nation's largest health insurer, handling more than 1 billion claims per year. Medicare and Medicaid together provide health care insurance for one in four Americans.



### THE SECOND ANNUAL TRAUMA SPECTRUM DISORDERS CONFERENCE: A SCIENTIFIC CONFERENCE ON THE IMPACT OF MILITARY SERVICE ON FAMILIES AND CAREGIVERS

#### DEFENSE CENTERS OF EXCELLENCE FOR PSYCHOLOGICAL HEALTH AND TRAUMATIC BRAIN INJURY

DECEMBER 10, 2009

### EXECUTIVE SUMMARY

As Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) continue to demand sacrifices from the armed services, the prevalence of psychological health and traumatic brain injury, collectively trauma spectrum disorders (TSD) continues to rise. Service members and veterans returning home frequently find themselves replacing combat stress with physical and psychological stress that is sometimes equally challenging and traumatic. TSD survivors and their families struggle to understand, make meaning, and express emotions around TSD. Frequently, they find informal and formal support inaccessible or are simply unaware of available support. The Defense Centers of Excellence (DCoE) for Psychological Health (PH) and Traumatic Brain Injury (TBI) was established to coordinate and enhance government and non-governmental efforts to meet the needs of survivors, families, and caregivers across the continuum of resiliency, reintegration, and recovery.

To this end, on December 10, 2009, DCoE hosted the multidisciplinary, cross-agency Second Annual Trauma Spectrum Disorders Conference in order to focus on the impact of TSD on military and veteran families and caregivers across deployment, homecoming, and reintegration. The conference participants: 1) examined the needs of families and caregivers in support of military and veterans with TSD, 2) discussed the factors related to family functioning and reintegration, 3) described effective approaches that facilitate family functioning and reintegration, 4) recommended plans for addressing the impact of military service on families and caregivers, and 5) considered gender and health disparities that permeate TSD. The conference was jointly organized by the DCoE, the National Institutes of Health (NIH), the Department of Veterans Affairs (VA), the Department of Health and Human Services (HHS), and other Federal Government partners. Conference participants represented a wide range of constituencies including, but not limited to, physicians, psychologists, mental health practitioners, social workers, clinical researchers, public health investigator, counselor educators, physical and occupational therapists, health care administrators, military and civilian agency leaders and policymakers, and even service members and their families.

The day was organized into a morning, unified session that began with opening remarks by conference leaders and PH/TBI policymakers and subsequently focused on research and new data regarding the psychological and neurological impact of OEF/OIF deployment on service members, their families, and their caregivers. Following the lunch break, conference participants had the choice of attending three different presentation tracks in the afternoon. In Track 1, presenters and participants discussed trauma-related caregiving, including the latest research on caregivers of OEF/OIF injured populations. The Track 2 agenda addressed the impact on child and adolescent development by parental military deployment, service, and reintegration. In Track 3, presentations focused on the impact of current and prior military



## Executive Summary



service on adult relationships. A final presentation provided an overview of the lessons learned during the conference. This document—"The Second Annual Trauma Spectrum Disorders Conference: Conference Proceedings" provides synopses of the various presentation sessions.

The conference provided a much needed opportunity for TSD professionals to interact productively as a community. While the conference was not the first such event, it was the first collaborative, multidisciplinary event to enable highly detailed knowledge sharing and discussion around TSD topics that have significant questions remaining, namely caregiver challenges, child and adolescent impact, and family and marital relationship struggles. Many of the participants work on TSD individually, and do not readily have the

opportunity to collaborate and interact. The conference was a unique opportunity for participants to engage in forthright discussion about current research and remaining knowledge gaps. As such, the conference helped to strengthen the TSD research and clinician community, building new and cultivating old relationships, enabling new, exciting collaboration across disciplines and government entities.

One of the major themes was the recognition of the need for further research towards understanding that the TSD population is not uniform and that there is significant variation. Research is needed not only toward identification of differences in groups, but also toward identification of the appropriate grouping and segmentation. Initial results show that there are significant variations between women and men, rural and urban/suburban, and Reserve/Guard components and full-time active-duty populations. Furthermore, much of the research base today has been established through cross-sectional studies, and in order to develop a thorough understanding of TSD progression over time, longitudinal studies evaluating TSD populations and their families are necessary. Additionally, another major research theme observed was the emergence of two tracks of focus for TSD interventions--treatment and prevention. As TSD understanding develops and as the growth of the TSD population shows no signs of slowing, researchers are now beginning to focus on resilience building in at-risk populations. Finally, the theme of reconciling research with practice emerged frequently throughout all presentations. Translation remains a top challenge for the TSD community, and it was evident in the content of presentations themselves, as they tended to focus on either population demographics or therapeutic intervention exclusively. In order to help bridge the gap, conference participants identified the need for increased public health strategic planning and greater collaboration between researchers and practitioners.

The Second Annual Trauma Spectrum Disorders Conference was successful. Through it, the TSD community had the opportunity to collaboratively identify the needs of families and caregivers in support



## Executive Summary



of military and veteran personnel with TSD. Participants worked together to examine current and emerging research on the impact of TSD on military and veteran families and caregivers. It also provided a venue to evaluate new and existing programs designed to assist military and veteran families and caregivers dealing with TSD. Through vibrant discussion, participants identified research gaps and established next steps for research and considered strategies for the dissemination and translation of research into practice. For DoD, NIH, VA, and other Federal Partners, the conference also provided ideas for policy improvements around TSD support and care delivery.

## SESSION I

### ***DATA FOR DECISION MAKING: WHAT THE DATA SAY ABOUT THE IMPACT OF DEPLOYMENT ON FAMILIES AND CAREGIVERS?***

The morning plenary presentations provided participants with a foundation on recent research and new data regarding the psychological and neurological impact of OEF/OIF deployment on service members, their families, and their caregivers.

### ***AN INTRODUCTION TO THE EFFECTS OF DEPLOYMENT ON SERVICE MEMBERS AND THEIR FAMILIES' PERSPECTIVES FROM THE SPONSORING AGENCIES AND THE PRIVATE SECTOR***

*Dr. Stephen Cozza, MD, Center for the Study of Traumatic Stress, Uniformed Services University of the Health Sciences*

- Multiple deployments leading to more service members returning with MH/TBI issues
- Families of service members face challenges of deployment, physical injury, psychiatric illness, and death
- Families need to be better equipped to manage these challenges

Within the military community, the concept of the military family is still relatively new. Children and family of service members make up the largest constituency and are often dependent on their serving family member. Of active duty service members, 44% have children, 66% of which are under the age of 11, and 40% of which are under the age of 5. Furthermore, the most important recovery and social support system for military service members is the family. The wellbeing of the family is interconnected with the wellbeing of service member. As multiple deployments lead to increasing numbers of service members returning with mental health and traumatic brain injury issues, families need to be better equipped to manage these challenges.



The major groups of challenges families of service members may face include deployment, physical injury, psychiatric illness, and death. The corrosive impact of these stressors is manifold and exacerbated during multiple wartime deployments. The roles of responsible family members, such as parents, may become impaired as they struggle to manage anxiety and personal stress, leading to the disruption of relationships, interpersonal strife, and loss of attachments. While there is significant literature on stress caused by deployment, there is limited data on how combat-exposed military communities, children, and families manage stress. Likewise, the impact of parental physical injury psychiatric illness on military children is often disruptive, leading to changes in parenting, and disrupting the child's development. This disruption can lead to increase risk behaviors. In these families, 80% reported moderate to severe impact on living arrangements, 78% reported moderate to severe impact



on child and family schedule, 86% reported spending less time with children, and 48% reported moderate to severe impact on discipline

When developing support resources, it is important to consider potential risk factors and social connectedness. In addition unique challenges in theatre must also be considered, such as the level of traumatic combat exposure, which correlates with resultant psychiatric sequelae and other morbidity, such as depression, posttraumatic stress disorder (PTSD), substance use disorders (SUD), and cognitive disorders. Furthermore, developers of support resources should note that in Post Deployment Health Re-Assessments (PDHRA), where over 88,000 SMEs were sampled, 40% of combat veteran Reserve and NG components had symptoms warranting a mental health referral in contrast to their initial assessment.

### ***THE MILLENNIUM COHORT STUDY: A 21-YEAR CONTRIBUTION TO THE UNDERSTANDING OF MILITARY AND VETERANS' HEALTH***

*Dr. Timothy S. Wells, MPH, PhD, 711th Human Performance Wing, United States Air Force*

- Millennium Cohort Study is a longitudinal study designed to evaluate long-term subjective health and chronic diagnosed health problems
- Administered survey on three year intervals, leveraging standard instruments to measure physical health, behavioral health, and mental health
- Study showed combat exposures, rather than deployment itself, significantly affect onset of mental health symptoms

The Millennium Cohort Study is a longitudinal study designed to evaluate long-term subjective health and chronic diagnosed health problems, especially in relationship to exposures of military concern and deployments. The study includes all Services, including active duty, Reserve, and National Guard. The study was launched in 2001 with 77,047 participants and continues to expand. More than 70% of participants have at least one follow-up resurvey with about 50% deployed in support of OEF/OIF and about 20% retired from military service.

The basic methodology is a survey administered on three year intervals, leveraging standard instruments such as PHQ, PCL, SF-36V, and others, that measure physical health, behavioral health, mental health, along with exposure metrics such as deployment, sleep, etc. Additional cohort data is collected through a broad array of medical history, and demographic

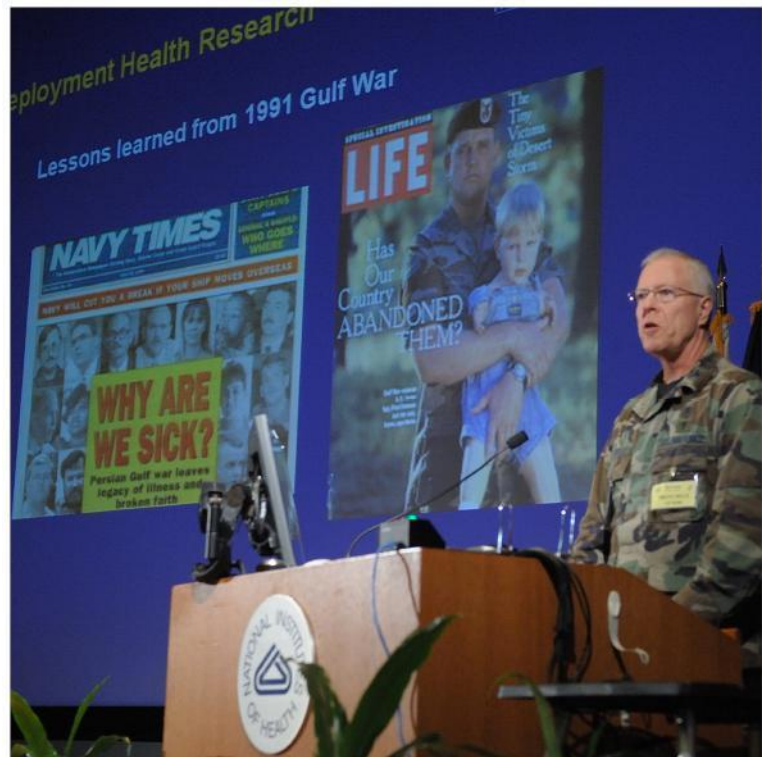




databases, including Military Health, Veterans' Affairs, and deployment data. The cohort is evaluated against the PTSD Checklist-Civilian Version (PCL-C) and the PRIME-MD Patient Health Questionnaire (PHQ). Baseline PTSD Prevalence was established using self-report (1.2% PTSD diagnosis, 2.0% PTSD symptoms without diagnosis, and 0.4% PTSD diagnosis without symptoms), and self-reporters were more likely to be women, less educated, newly married or divorced, current smokers, or problem alcohol drinkers.

New-onset PTSD symptoms or diagnosis, over the approximate 3 year period between baseline and follow-up, were identified in 7.6% - 8.7% of those deployed with combat, 1.4% - 2.1% of those who deployed without combat, and 2.3% - 3.0% of those who did not deploy. Persistent PTSD symptoms or diagnosis, over the approximate 3 years between baseline and follow-up, were identified in 43.5% - 47.9% of those who deployed with combat, 22.4% - 26.2% of those who deployed without combat, and 45.9% - 47.6% of those who did not deploy. Furthermore, new-onset PTSD symptoms or diagnosis among combat deployers were identified in 21.7% of women who reported prior assault, 10.1% of women who did not report prior assault, 12.4% of men who reported prior assault, and 5.9% of men who did not report prior assault. In contrast to hypotheses that survival from trauma represents or confers resilience, these findings suggest vulnerability to combat stress and PTSD among survivors of prior assault.

In conclusion, the study revealed that combat exposures, rather than deployment itself, significantly affect onset of mental health symptoms, problem alcohol drinking, and cigarette smoking post-deployment. The cohort also exhibited a significant amount of newly reported smoking and problem drinking in correlation with newly reported mental health symptoms following combat deployment. The study also suggested that specific populations, including those with poor mental, physical health, and prior stressful life events, could be targeted for PTSD prevention programs.



### ***THE VA'S CHANGING MISSION: FOCUSING ON FAMILIES AND CAREGIVERS OF VETERANS WITH TRAUMA***

*Susan McCutcheon, RN, Family Services, Women's Mental Health and Military Sexual Trauma, Office of Mental Health Services, Veterans Health Administration*

*Heather Mahoney- Gleason, LCSW, Caregiver Support, Department of Veterans Affairs*

*Dr. Anne Sadler, RN, PhD, Center for Research in the Implementation of Innovative Strategies in Practice, Iowa City Veterans Affairs Medical Center*

*Linda R. Lipson, MA, Women's Health, Equity, and Rural Health/Access Health Services Research and Development Service, Office of Research and Development, Department of Veterans Affairs*

- As a result of OEF/OIF, VA adapting to serve military population that now includes large numbers of females, Reserve, and National Guard
- VA also shifting from veteran-only to family-inclusive services; post-deployment family and caretaker impact top priority for VA
- VA new research and treatment studies veteran-focused and family- and caregiver-focused

With the advent OEF and OIF, the once predominantly male, regular military duty VA population rapidly changed to include unprecedented numbers of females and Reserve and National Guard Service members. Few studies have systematically investigated the family consequences of acute or repeated trauma(s) associated with war. Existing research suggests that family problems during and following deployment are widespread and have significant impact on veteran reintegration and family functioning.

Currently, there is a continuum of family services offered within the VA, including family education, Family Consultation (FC), and Family Psychoeducation (FPE) for veterans with serious mental illness. Family education includes factual information necessary to support veterans and their families, provided in collaboration between the VA and the National Alliance on Mental Illness. Family Consultation involves as-needed family meetings, typically one to five for each intervention, with mental health professionals in order to resolve specific issues related to the veterans' treatment and recovery. In addition, FPE is available as a type of evidence-based family therapy, focusing on





developing coping skills for managing the mental illness of a family member. Recently, marriage and family counseling has been added as an available service.

Marking a paradigm shift from veteran-only to family-inclusive services, public laws 109-461 and 110-387 passed in 2007 to conduct eight caregiver pilot programs, with over 1,400 participants. There were several lessons learned from the pilot programs. First, a multi-mode approach was most effective, followed by face-to-face intervention and caregiver education. Web-based and telephone communication are also effective. Second, education and support for caregivers was effective in identifying caregiver and family needs. Third, the pilots also showed that families and caregivers are very vulnerable during the transition from hospital to home and, as such, direct assistance is needed. Finally, the pilots indicated that services structured along the trajectory of care, with menu of short and long-term options, were most effective.

Post-deployment family and caretaker impact are now a top priority for the VA. PTSD and depression are highly prevalent in returning OEF/OIF Veterans. In first year post-deployment, OEF/OIF veterans exhibited significantly lower marital satisfaction. Likewise, recently returned military veterans with depression or PTSD are about five times more likely to have problems with family adjustment than veterans without these diagnoses. (Sayers et al, 2009). Moreover, there is a strong correlation between combat trauma and domestic violence. Specifically, 54% reported shouting, pushing, or shoving conflicts with partner, 25% reported that their child acts afraid of or cold towards the veteran, 28% acknowledged that their partner is afraid of them, and almost 25% reported guns were in the home. Another study showed that the mental health of OEF/OIF spouses and partners is strongly correlated with the veteran's. In particular, 15% of service members and 13% of spouses and partners reported depression, 7% and 9% suicide risk, and 16% and 22% reported PTSD respectively (sample: 285 R/NG; 56% male, 44% female, at least one deployment).

Furthermore, women face unique challenges balancing family with deployments. Women now represent 15% of active duty service members, 20% of new recruits, and 17% of Reserve and National Guard. Women also see an equal amount of hardship and risk from service, with 71% seeing at least one combat exposure. Women are the fastest growing segment of new VA users. They currently make up 5-7% of VA users, but of the female OEF/OIF population, more than 40% utilize the VA.

To address this myriad of issues, the VA is conducting a broad range of OEF/OIF combat veteran research and treatment studies within two paradigms: veteran-focused and family- and caregiver-focused. Notable studies currently include analysis of women's combat and deployment experiences relating to PTSD risk; reintegration and service needs of veteran mothers; focus groups evaluating stigma, gender, and other barriers to care; use, costs, and outcomes evaluation among female and male OEF/OIF veterans after separation from service, comprehensive survey of VA awareness, edibility, patient preferences, patient needs, and patient experiences; effectiveness of caregiver support in optimizing management of impairments resultant from polytrauma and blast-related injuries; value of peer visitation for OEF/OIF veterans with polytrauma and their caregivers; and evaluation of family function and coping after veteran suffers from sustained polytrauma. The VA hopes that translating this research into practice will improve access to care and optimize the delivery services to veterans, their families, and their caregivers.



### ***DISPATCHES FROM THE FIELD: FROM RESEARCH TO APPLICATION AND BACK AGAIN***

*Dr. David Riggs, PhD, Center for Deployment Psychology*

- Translation of research to treatment is a top challenge for TSD community
- Researchers have benefit of specialization; however, clinicians must be knowledgeable on all aspects of TSD patient treatment
- TSD community should develop clinician-friendly mechanisms for research dissemination



Translation, specifically bringing evidence based care data to the patient bedside, to families, and into communities, is a major challenge for TSD treatment. Some believe that if they publish their research, the TSD community will internalize it and apply it to interventions. However, over the years this does not appear to have been the case. There is significantly more to the translation process.

Dr. Joan Cook and colleagues recently published data regarding how health care providers make decisions. They concluded that providers simply employed their academic training, rarely relying on data and the emerging evidence base. For the TSD community, this raises significant questions. How can the community encourage providers to employ evidence-based interventions? How do providers process and internalize the data? What does the data mean to providers in the field? How can research be formatted into process-oriented takeaways? How should providers be alerted to important patient risks? How can new research be taught to clinicians in a way they appreciate?

Researchers have the benefit of specialization; however, clinicians must remain informed on a wide range of literature while continuing to manage time-consuming patient treatment. The reality is that clinicians cannot easily specialize like researchers, and so, the TSD research community should consider engaging clinicians in the conversation, so that new research may be effectively delivered to them, and ultimately veterans in need of treatment.

### ***THE MILLENNIUM COHORT STUDY: FAMILIES***

*Dr. William Schlenger, PhD, ABT Associates' Behavioral Health Research Program*

- Need to better understand the health effects of military service on families
- Millennium Cohort Study enrolled over 151,000 participants since 2001, surveying every 3 years
- Hope to identify specific interventions for deployment-related stress, family member resilience, family support dynamics, service member and family well-being, and force readiness

Family relationships can be a source of support or stress for service members; however, historically, there have been few studies on the impact of deployment on family members and family functioning. The Millennium Cohort Study has enrolled over 151,000 participants since 2001, surveying every three years, with



the goal of better understanding the health effects of military service on families.

As part of the 2010 group of the Millennium Cohort Study, there are a number of funded, family research studies launching in 2010. These Family Cohort studies hope to investigate the family health impact of military deployment and occupational exposures and to assess the importance of family support on the health outcomes of returning service members. 62,500 military service members are estimated to enroll in the 2010 Millennium Cohort Study enrollment phase. Of this enrollment phase, about 50% of the sample will be married by design, with 65% of those estimated to authorize contact with their spouse, and of those 50% estimated to respond. The upshot is approximately 10,156 active spouses in the sample. This will be the first true comparison study on the family impact of military deployment.

The 2010 sample will receive surveys inquiring about demographic information; general health (including sleep); spouse, family, child, and service member stress; impact of deployment and military service; family cohesion, expressiveness, and conflict; child behavioral, developmental, and general health; experience with health services; alcohol and tobacco use; and military-specific questions for active-duty spouses. The ambition is that this research will facilitate identification of specific interventions for deployment-related stress, family member resilience, family support dynamics, service member and family well-being, and force readiness. Results are expected to become available beginning in 2012. Following this phase, families of unmarried service members will be analyzed.

### ***JOINT RESEARCH EFFORTS OF RAND AND THE NATIONAL MILITARY FAMILY ASSOCIATION***

*Dr. Anita Chandra, DrPH RAND Corporation*

- Research on multiple, extended deployments on children missing
- RAND and National Military Family Association devised longitudinal study of military children 11 to 17 from Operation Purple Camps
- Academically, military children on par with national averages
- Military children scored lower on mental health, peer relationships, emotional difficulties, and anxiety

It is widely understood that multiple and extended deployments are straining military families, and many programs have been launched to support families; however, there are still knowledge gaps of the impact on children, socially, emotionally, and academically. RAND devised their study of the impact of OIF/OEF deployment on children, commissioned by the National Military Family Association and the largest of such to date, such that science could easily translate to policy and subsequently to action. The primary research questions were how adolescent military children are fairing, and what are the specific issues faced during deployment and reintegration.

This longitudinal study included 1,500 families from applicants to Operation Purple Camps and was designed to represent deploying personnel by





Service and component. The sample was comprised of children ages 11 to 17, and was made up of 28% minorities and 47% females. Data were collected through multiple waves of phone surveys with both the child and the non-deployed parent from June to August 2008.

The results of the study show that, academically, military children are on par with other U.S. children. However, with regard to peer relationships, military children were functioning below US averages. Also with regard to anxiety and emotional difficulties, they also were functioning lower compared to other US populations. Higher numbers of children were reporting anxiety symptoms. Upon further investigation, one third of the sample reported emotional difficulties in the moderate to high range, compared to one fifth in the national sample. Girls generally reported more anxiety compared to boys. Four risk factors were discovered: age, gender, months of deployment, and parent mental health. The mental health of the non-deployed parent is very important. Children whose non-deployed parent reported better mental health experienced fewer challenges.

### **ARMY STARRS: ARMY STUDY TO ASSESS RISK AND RESILIENCE IN SERVICE MEMBERS**

*Dr. Robert Heinssen, National Institute of Mental Health (NIMH), National Institutes of Health*

- Rising rate of suicides of active service members
- Three rapid, ongoing Army Study to Assess Risk and Resilience in Service Members (STARRS) programs identifying risk/protective factors, interventions
- Continually adjusting and reevaluating programs to incoming data

In 2008, the Army became concerned about data showing the rising rate of suicides of active service members. The army reached out to NIMH for a scientific approach to get ahead of the problem. The Army STARRS program was shortly launched to identify salient risk and protective factors (e.g., genetic, neurobiological, and cognitive features; social support; training experiences; cumulative stressors; and triggering events), to inform development of empirically-derived interventions (i.e., identify and target malleable risk and protective factors), and to deliver actionable findings rapidly (utilizing interim data analyses, adaptive research design, and iterative signal detection and confirmation).

To this end, the Army STARRS program is pursuing several scientific projects. First, the program is conducting a historical analysis of soldiers with and without suicidal behavior since 2004 (using all data available on active duty soldiers, 2004-2009). Second, a representative sample of 90,000 active duty soldiers, including mobilized Reserve and National Guard soldiers, will be surveyed. Third, a census of new recruits in 2010, 2011, and 2012 (~80,000 – 120,000 soldiers per year) will drive longitudinal follow-up with 15,000 soldiers exhibiting particular risk characteristics.

The program also includes notable special features. There is an ongoing feedback loop between retrospective data analysis, case control studies, and prospective surveys. In addition, family-member and unit-leadership informants provide additional information about social and environmental context (i.e., culture, cohesion, and stress). The program is also tasked with evaluating current and future Army suicide prevention and treatment interventions, as well as exploring potential neurobiological risk and protective factors.



### RESERVE COMPONENT PERSPECTIVES

*Brigadier General Margaret Wilmoth, PhD, MSS, RN, FAAN, Department of Adult Health Nursing, The College of Health & Human Services, University of North Carolina at Charlotte*

- 9/11 resulted in Reserve Components transforming into operational forces, chronic deployments
- Reservists under considerable stress, higher rates of mental health disorders, substance abuse, family issues
- Need to research impact and interventions tailored for Reservists



As a result of September 11, 2001, the Reserve Components have experienced a major paradigm shift. Reserve forces are now an operational group. Reservists comprise 1.1 million of service volunteers: 888,892 males, 192,453 females. The average age is 38 years. Since 9/11, Reservists have been deploying on a rotational basis of 12 months at a time. Half are married, and Reservists are responsible for 1,618,041 dependents (nearly 400,000 of which are adolescents), who can only access the the Military Health System when Reservists are on active duty. Most live in communities far from military installations and lack understanding of and experience with the military. It is also important to note that employers are significantly affected when Reservists are on active duty and that when leaving and returning, Reservists only have two weeks to adjust.

Reservists are managing significant effects due to their chronic deployment. Multiple deployments and returns amplify family problems and stress strained relationships and financial resources. A single deployment may create problems with civilian employers. Deployment often leads to an increase in substance dependence and abuse. The smoking rate is 8-9% across all Reserve Components, with higher rates of heavy smoking in the Army National Guard (ARNG), the United States Marine Corps Reserve (USMCR) and the United States Army Reserve (USAR). Daily alcohol consumption rates are lower in the United States Air Force Reserve (USAFR), the Air National Guard (ANG), and the United States Navy Reserve (USNR) compared to the ARNG, the USAR, and the USMCR. Illegal substance use is highest in the ARNG and lowest in the USNR. When identified, all illegal drug users are out-processed from the Reserve Component.

Reservists are under considerable stress. Civilian employment is the largest stressor, as juggling two careers is a significant challenge. As a result, stress can be higher than an active duty service member. Family and employment are also stressors. 36% report military work demands interfere with family life, with the highest level of family-work conflict in the USMCR and lowest in the ANG. A recent Department of Defense survey indicated that women are significantly more stressed than men, as 25% reported a "great deal" of stress related to being a female in a male-dominated, combat-oriented environment. More than 50% of females and 37% of males reported some type of physical or sexual harassment or abuse.

There is much left unstudied about the Reserve Components. This is a result of the limited contact with Reservists, usually 16 hours per month in one weekend. Areas of research needing Reserve-specific investigation are effective ways to reduce tobacco and alcohol use, effective gender-appropriate stress-reduction education, variation in deployment response by gender and component, effective interventions to assist families and children cope with deployment, and strategies to provide services to a geographically-dispersed force.

### ***WHAT TO DO UNTIL THE RESULTS ARE IN: COMBINING AVAILABLE RESEARCH, CLINICAL EXPERIENCE AND COMMON SENSE TO ADDRESS PROBLEMS NOW***

*Dr. Mark Willenbring, MD, Adjunct Professor of Psychiatry, University of Minnesota, Consultant to the National Institute on Alcohol Abuse and Alcoholism*

- Research often leaves healthcare practitioners wanting, sometimes no clear next steps
- Providers should be aware of practice guidelines for evidence-based treatments
- Clinicians should remain skeptical, understand the levels of evidence
- Practitioners should continue to adapt to unique patient circumstances

Epidemiologic studies fall short in providing clear next steps for health care providers. However, providers have an obligation to implement the latest evidence to guide care delivery. There are a number of general principles providers should follow when applying new research. Providers must remain skeptical of studies and therapies that lack a solid evidence base. They must also remember to listen to patients and their families when planning care. Likewise, they should not be afraid to do what makes sense to them (within professional boundaries). Overall, provider empathy and skill are more important than provider's choice of treatment or alma mater. It is also important to maintain a strong grasp of common sense--a randomized controlled trial is not necessary for every therapy. However, performance measurement and quality improvement are cornerstones to good care. Providers should measure outcomes continuously and examine their own practice internally as well as externally against other providers.

There are also specific practice guidelines providers should keep in mind when advocating evidence-based treatments. When describing the application of research to practice, other providers would benefit greatly from a thorough decision logic tree. In general, formal guidance for clinicians and policymakers can be essential for successful application of new research. However, it is important to leave room for deviation depending on individual circumstances, yet constrain choices to only allow deviation when clearly indicated. Some of the better clinical guidelines were developed using systematic reviews, with national or regional development groups and by including representatives of key stakeholders. Finally, explicit links between recommendation and the scientific evidence is crucial.

Remaining skeptical of evidence is also important. There are three different levels of evidence: Level I: consensus among experts, Level II: small clinical trials, Level III: large randomized controlled trials (RCTs), and finally meta-analyses of RCTs. There are also significant shortcomings to evidence-based care. Not all treatments can be analyzed by RCTs. Typical RCTs exclude many complex patients. Longitudinal studies are also difficult to conduct in a randomized, controlled fashion. Finally, it is important to remain vigilant about improper generalization of evidence-based care from one population (e.g., civilians) to others (e.g., military).



## SESSION II

### Track 1: Caregiving

The presentations in the first track of the afternoon session of the conference agenda provided participants with a review of trauma-related caregiving, including the latest research on caregivers of OEF/OIF injured populations, with a direct insight into caregiver experiences, and with lessons learned from interventions with caregivers.

Moderators:

*Dr. Karen Huss, PhD, RN, APRN-BC, FAAN, FAAAAI, Office of Extramural Programs, National Institute of Nursing Research, National Institutes of Health*

*Dr. Joan M. Griffin, PhD, Center for Chronic Disease Outcomes Research, Minneapolis Veterans Affairs Medical Center; Department of Medicine, University of Minnesota*

### OVERVIEW OF TRAUMA RELATED CAREGIVING RESEARCH

*Dr. Karen Huss, PhD, RN, APRN-BC, FAAN, FAAAAI, Office of Extramural Programs, National Institute of Nursing Research, National Institutes of Health*

- National Institute of Nursing Research (NINR) mission to improve health of individuals, families, and communities
- Supports and conducts clinical and basic research on health and illness across the lifespan
- Focus on health promotion and disease prevention, quality of life, health disparities, and end-of-life care



The mission of the NINR is to promote and improve health of individuals, families, and communities. NINR supports and conducts clinical and basic research on health and illness across the lifespan. Emphasis areas include health promotion and disease prevention, quality of life, health disparities, and end-of-life care. Within the quality of life research, the NINR strives to improve the quality of life of patients and family following a war-related traumatic injury. NINR's quality of life research comprises of three lines of inquiry. First, NINR is researching self-management strategies including early identification of symptoms and behaviors that support adherence and self-care. Second, NINR is studying symptom management, including causative mechanisms such as genetic biomarkers and interventions to improve response to treatments and symptom management. Third, NINR is focusing on caregiving, both formal and informal, including coping strategies and transitions in care settings.



### *THE CAREGIVER EXPERIENCE*

*Mrs. Sherri Hall, Military Spouse*

- First-hand account of human impact of PTSD on military spouse
- Frequently felt like they were facing these challenges on their own, without support
- Experience has shown where to get support, teaching other families

Sherri Hall married her high school sweetheart, Jeff Hall, nearly 19 years ago. They have two teenage daughters one a high school senior, the other a sophomore, one an athlete, the other a theatre child. When they met in 1986, Jeff said, "I'm joining the army when I graduate. I'm going to go off and conquer the world." Sherry only knew her father's stories of his few years of service in war. When September 11 happened, Jeff was saddened, but at the same time, he was "fixing to change." At the time, Sherri and he were at Fort Still school house. He was ready to do what he had joined the army to do; but they had to wait for a whole year. Jeff was very excited to go. He was committed to victory. He wanted to win. He was fearless and well-trained. He made sure his soldier were also well-trained.

At the end of the first tour, Jeff took over command in-country. His commander was killed by sniper, and Jeff stepped up and took command. It was now Sherri's job to keep in touch with the fifty wives serving under Jeff was more concerned with his men coming back alive. Jeff's family all had their guards up; even their daughters would not let their guard down. As his tour came to a close in April 2004, he already knew that they would be going back fairly quickly. Within ten months of returning home, he was back on a plane to her second tour. During the ten months he was home he only spent three months together with his family.

Jeff left for his second tour in February 2005. His platoon executed their mission, and to this day Jeff does not know what that mission was, "other than driving around and getting blown up and shot off." Jeff would regularly send letters and emails, complaining and not happy. Sherri told him, "I realize that your life is crap right now, but if you think things are easy back here, you are sadly mistaken. I am one person with two kids and 50 wives."

Jeff returned home on R&R, after 4 months being deployed. He tried to get Sherri reduce her responsibilities. In Oct 2005, Jeff left command. He had a foot injury and needed to come home and have surgery. End of October came, and Sherri's husband had not returned. In November 2005, another platoon, attached to Jeff's when Jeff had been in command, was hit by an IED. Jeff was heartbroken. Those were his comrades when he was in command. At the same time, Sherri and Jeff had a family tragedy within the battalion. They talked about it only a little. Two days after Christmas 2005, Jeff returned home

Sherri sat in a hanger waiting for two hours. She remembers, "This is how you knew your loved one was coming home." The door open and in walks my husband first. At that moment, Sherri saw in Jeff's







eyes a very lost person. She knew immediately that I was seeing a different person. "My husband wasn't my husband anymore."

Sherri started encouraging Jeff to get help. He talked to a counselor, who told him that he was angry and that he "would get over it and be fine." Sherri knew it was more serious than that, but "nobody wants to listen to a spouse." To Sherri, it was "basically from one battlefield right back to another battlefield. Sherri and Jeff went into denial about the problem. They were transferred to Fort Polk, where Jeff started his new job. He was not happy. He "sucked it up and drove on." The same thing he had been doing for five months.

Two and a half years later, Jeff "hit a brick wall going about thousand miles per hour." He couldn't put his uniform and boots on. He didn't want to go to work. Her didn't want to live. And he didn't want his family around. This was more than Sherri could handle. This was not the man that she had grown to love. It was painful for her to watch Jeff deal with this. He would only tell Sherri bits and pieces, and she is still trying to fill in the gaps.

One day, Jeff went for a run. While out running, he called Sherri and said, "I need you to come pick me up. I started running and my chest started hurting and I thought if I keep going it will just explode." Jeff talked to his Colonel who was gracious enough to connect them with a counselor at Fort Polk.

During this time, Sherri would rush when picking up their kids. She didn't want to leave Jeff alone. She asked him, "who benefits from your death if you kill yourself?" He said, "I do."

"It won't be over because you will leave me and your two daughters. I will be left to explain."

At this time, the physician treating Jeff said that his problems were too big for Sherri to manage. Jeff signed up for a one-week residential psychiatric evaluation at Walter Reed. When Jeff came home has asked Sherri to come with him should he be admitted to the full program. For the first time in a long time, they saw a little bit of hope. He joined the program and began with group and individual therapy. Going through the program with Jeff, Sherri could hear everything Jeff with struggling with, and Sherri could tell Jeff about her struggles.

She told him that all she wanted to do was be at her house 24/7. She could not sleep at night. She had stopped volunteering and has cut ties with all of her friends. The program helped them share those feelings. As Jeff transitioned back to work, he was like a "bug in a jar" with everyone watching him. It took him two and a half years to get help, and it is going to take much longer to recover completely.

Sherri and Jeff moved the family back to Fort Riley, Kansas. In February, Jeff learned that he has a degenerative back disorder, and that he can no longer be deployed. He also been diagnosed with possible multiple sclerosis. Jeff has mixed feelings about no longer being deployed, but Sherri does not. Sherri wants to dedicate herself to advocacy for soldiers and families. There are resources available for families, but when Sherri was struggling, she thought she was the only spouse who was facing these challenges. "I thought my husband was the only one with PTSD."

Recently, Sherri and Jeff participated in a film profile for the Real Warriors campaign, and through that, Sherri read through old letters, and she told Jeff, "There were warning signs in these letters. Knowing what I know now, you were in trouble then."

### *A PROFILE OF CAREGIVING IN THE CIVILIAN POPULATION*

*Dr. Peter S. Arno, PhD, Department of Health Policy & Management, School of Health Sciences and Practice, New York Medical College*

*Dr. Deborah Viola, PhD, Department of Health Policy & Management, School of Health Sciences and Practice, New York Medical College*

- Researchers at the New York Medical College analyzing the cost-benefit of informal caregivers
- Number of socioeconomic factors affect caregivers and care recipients, including income, education, race and ethnicity, gender, age, marital status, and socialization
- Need to develop a better caregiving economy, caregiving professions must become an attractive career choice

Traditionally, caregiving research has focused on those caring for the elderly population, typically female, formal caregivers. Recently, the researchers at the New York Medical College began to analyze the cost-benefit of informal caregivers. At the same time, their focus shifted to include the disabled population as they age. There is significant growth in the older populations, 70-84 and 85+, with chronic conditions requiring care. Furthermore, two-thirds of women older than 75 live alone whereas one-third of men over 75 live alone. Compounding the challenge, the decreasing rate of reproduction in the U.S. limits the availability of family caregivers. As a result, more frequently, other elderly individuals are caregivers not only caring for other elderly but also for disabled offspring. Today, about 76% of the 4.3 million people with developmental disabilities live at home, a quarter of them cared for by a family member who is at least 60 years old.



There are a number of socioeconomic factors that affect caregivers and care recipients, including income, education, race and ethnicity, gender, age, marital status, and socialization. First and foremost, more affordable care is needed. The majority of elderly that Social Security lifts from poverty are women. However, at the same time, about two-thirds of elderly women, who would otherwise qualify for care through poverty support services, no longer qualify due to Social Security support. As a result, about 20% of elderly women who require additional assistance are not able to obtain any type of care.

Currently, there are two solutions found in the caregiving continuum-- formal and informal care and residential care services. The goal of research is to better understand the impact of these services in order to help inform public policy to improve long term supply of caregiving in the U.S. According to the US Census, the number of elderly over 65 is expected to double over the next 50 years. The demand

for increased care will increase 34% by 2016, but the availability of caregivers (defined as females aged 25-54) is projected to grow only 1% over the same length of time. In order to maintain the current number of individuals who provide formal care, between now and 2050, the labor force would need to double.

To develop a better caregiving economy, caregiving professions must become an attractive career choice. With regards to this, the Institute of Medicine (IOM) published a recommendation stating, “State Medicaid programs should increase pay and fringe benefits for direct-care workers through such measures as wage pass-through, setting wage floors, establishing minimum percentages of service rates directed to direct-care labor costs, and other means.” Furthermore direct and indirect costs incurred by informal caregivers need to be compensated. On this the IOM stated, “State Medicaid programs should increase pay and fringe benefits for direct-care workers through such measures as wage pass-through, setting wage floors, establishing minimum percentages of service rates directed to direct-care labor costs, and other means.” To date, no U.S. federal tax-based relief exists for caregivers’ time. Direct costs are allowed as deductions under Dependent Care Tax Credit, but their impact is limited. State-level approaches vary considerably, with only seven states providing a tax credit for caregivers’ time.

### **PARENTS AS CAREGIVERS OF INJURED CHILD**

*Dr. Joanne M. Youngblut, PhD, RN, FAAN, Department of Nursing, Florida International University*

- Longitudinal study to better understand the impact of a preschool child’s head injury on parents during the first year post-hospital discharge
- Pediatric head trauma more stressful for mothers of children in pediatric intensive care unit (PICU) than mothers of children in general care unit (GCU); mothers more stressed than fathers
- Moderate GCS score and longer hospital stay usually results greater caregiver stress
- Mothers’ perception of child risk can lead to excessive vigilance and surveillance of the child



In the U.S., 475,000 children (0-14 years old) experience traumatic brain injuries each year, accounting for 2,685 deaths, 37,000 hospitalizations, and 435,000 emergency department visits. The purpose of this longitudinal study was to better understand the impact of a preschool child’s head injury during the first year post-hospital discharge. Areas investigated included effectiveness of resistance resources, reactions by the mother, mother’s mental health, and quality of mother-child and family relationships. At the same time, the researches aimed to identify mother, child, and family factors correlating with the mothers’ reactions and with post-discharge functioning of mothers, mother-child dyads, and families.

Recruited mothers (n=183) were those whose 3- to 6-year-old child was hospitalized for head trauma. These included those where a blow to the head was likely, who had a history of loss of consciousness, and whose symptoms of head injury, or x-ray or CT scan suggested head trauma. Exclusion criteria were severe pre-existing cognitive deficits, pre-existing chronic illness, previous hospitalization other than at birth, living in a foster home before admission, being evaluated with brain death criteria, injury suspected to be due to child abuse, parent(s) hospitalized concurrently or death of a parent in the injury event. Half of the children in the sample were initially hospitalized in the PICU or GCU.

Data were collected in the hospital at 24-48 hours after admission and in the family's home at 2 weeks, 3, 6, and 12 months after discharge. Instruments included the FACES II, Parenting Stress Index, HOME, Abbreviated Injury Severity Scale, Glasgow Coma Scale (GCS), Baseline Psychological Distress & Wellbeing, Multidimensional Scale of Perceived Social Support, Mental Health Inventory, Parental Concerns Scale (PCS), and Parental Stressors Scale: PICU (PSS:PICU). Likewise, more qualitative assessments were conducted of mothers' top concerns and stressors at 24-48 hours after admission, mothers' reactions in hospital.

In the hospital, the experience of pediatric head trauma was more stressful for mothers of children in the PICU than mothers of children in the GCU, and mothers experienced more stress than fathers. Mothers' reactions were influenced by objective and perceived injury severity, social support, and psychological distress. Mothers' baseline mental health, continuing social support, and being in a 2-parent family were important for parent mental health and family cohesion 2 weeks post-discharge. Perceived injury severity and parent reactions to hospitalization also played a role. Greater degree of maternal stress in the first 24-48 hours of hospitalization had continuing negative effects on mothers' mental health, the mother-child relationship, and functioning of the family 3 months after the child's discharge. Social support and mother's mental health 24-48 hours after the child's admission were important for the mother-child relationship and family adaptability.

The research also identified long- and short-term maternal risk factors. In the long-term, a moderate GCS score and longer hospital stay usually results in greater caregiver stress. This stems from the mothers' struggle with more difficult child behavior, eg, hyperactivity, impulsivity, inattentiveness, memory deficits, information processing difficulties, and loss of previously mastered skills and functions. Likewise, in the long-term, less maternal education correlates with lower cognitive talents, knowledge of potentially helpful services, and creative problem solving. In both the short- and long-term, mothers' perception of child risk can lead to excessive vigilance and surveillance of the child resulting in "smother mothers," "helicopter moms," and Green & Solnit's vulnerable children. In addition, fewer resistance resources unsurprisingly lead to weaker maternal mental health.

Future research building from this dataset will include analysis of correlation of the child's abilities and deficits with mother, mother-child, and family functioning, investigation of changes in outcomes over time, and identify factors related to pattern of change. Likewise, further research will focus on fathers. Due to the typical father's parent and family roles being significantly different from the mother, perceptions, outcomes, and risk factors may also be different.

### ***THE BRAIN INJURY FAMILY INTERVENTION (BIFI): IMPLEMENTATION AND OUTCOMES***

*Dr. Jeffrey S. Kreutzer, PHD, ABPP, FACRM, Neuropsychology and Rehabilitation Program, Virginia Commonwealth University (VCU)*

- VCU developed, implemented, and studied new intervention named Brain Injury Family Intervention (BIFI)
- BIFI educates family members about injury, helps them develop skills to improve recovery, and provides psychological support
- Data indicated that BIFI meets the needs of family members, improves perception of service accessibility, and improves perceptions of patients' neurobehavioral functioning





"In my accident three things were damaged: the utility pole, the car and me. I knew what to do with the utility pole and the car. I didn't know what to do with me, and I still don't." These are the typical thoughts of a brain injury survivor. Brain injury often has a major, adverse long-term impact on the lives of survivors as indicated by research documenting neurobehavioral consequences, neuropsychological impairments, and high rates of unemployment. Family members often assume the long-term care giving role. The adverse impact of brain injury on family functioning and emotional well-being has been well documented, with 42% of brain injury patients meeting criteria for major depressive disorder, 8% marital separation rate, and 17% divorce rate. (Kreutzer, 2006)

Seeing the need to help families and survivors, clinical researchers have begun to develop and evaluate the benefits of family focused interventions. Their efforts have met with limited success. VCU developed, implemented, and studied a new intervention named Brain Injury Family Intervention (BIFI). The intervention was conceived with members of families and brain injury patients. Treatment is standardized, but sufficiently flexible to address family members' unique characteristics.

The goal of BIFI is to educate family members about injury, helps them develop skills to improve recovery (e.g., problem solving, managing intense emotions, goal setting, communication), and provides psychological support. The BIFI is typically implemented over a ten week period encompassing five two-hour sessions delivered at two week intervals. The five sessions focus on 1) the effects of brain injury on the survivor and family, 2) understanding recovery, 3) solving problems and setting goals, 4) managing stress and intense emotions, and 5) strategies for optimal recovery.

BIFI outcomes measurement procedures included records review and screening, collection of pre-treatment measures from survivor and family member(s), and collection of post-treatment measures immediately and 3 months following the intervention sessions. Outcomes measures included 1) family needs questionnaire, 2) service obstacles scale, 3) neurobehavioral functioning inventory, 4) brief symptom inventory, 5) satisfaction with life scale, 6) family assessment device, and 7) program satisfaction and goal attainment ratings.

The research indicated that the intervention meets the needs of family members, improves their perception of service accessibility, and improves their perceptions of patients' neurobehavioral functioning. Analysis also indicates that family members and survivors assign higher goal attainment and helpfulness ratings than the brain injury survivor. Only 75% of survivors agreed that the intervention helped them.

The BIFI and surrounding outcomes research demonstrated the benefits of standardized, family-focused intervention occurring immediately and continuing over 3 months. This research also succeeded with multi-method outcome assessment, receiving high ratings of helpfulness, goal attainment, satisfaction from caregivers and survivors. The BIFI is also adaptable across adult, adolescent, and military populations. Future research will review sustainability of gains beyond 3 months and alternative intervention formats (e.g. Internet and telephone).





### **POLYTRAUMA REHABILITATION CENTER FAMILY CARE MAP**

*Dr. Carmen Hall, RN, PhD, Veterans Affairs Medical Center, Minneapolis, Minnesota Implementation Research Coordinator, Polytrauma and Blast Related Injuries QUERI*

- To standardize and improve care provided to veteran families, VA partnered with PRC to implement a Quality Improvement Collaborative (QIC)
- Developed a web-based tool, the Family Care Map, to standardize and promote family-centered care
- Evaluation showed family-centered practices and satisfaction improved among rehabilitation interdisciplinary team members



The VA provides rehabilitation for combat Veterans with TBI and other significant injuries, a condition now referred to as polytrauma, at four regional, inpatient Polytrauma Rehabilitation Centers (PRCs). The PRCs are one component of a four-tiered Polytrauma System of Care (PSC) which was implemented in 2005 to optimize resources and create points of access across the continuum of care for Polytrauma/TBI patients and their families. Family members are intensely involved in the Polytrauma/TBI rehabilitation process yet may not always know how best to help their injured family member.

Despite the significant resources available, there are still gaps. First, absence of evidence, guidelines, and tools makes it an ongoing challenge. Second, practice variation leads to inconsistent outcomes. And third, the VA is just beginning to take a family-centered approach.

To standardize and improve care provided to these Veterans' family members, VA researchers partnered with PRC program leaders and rehabilitation specialists to implement a family care Quality Improvement Collaborative (QIC). The QIC is tasked with embracing the principles of family-centered care, which manifests through a respect for the unique characteristics of each family, an appreciation for family values and strengths, and empathy and understanding towards family concerns and needs. The goal is to empower families by including them as partners in care delivery and decision making.

The QIC's research objective was to analyze the VA PRC's program and suggest associated practice changes by performing a cross-site, mix method evaluation. Participants included rehabilitation interdisciplinary team members working at four participating PRC sites.

Over a period of eight months, the PRC Family care collaborative developed a web-based tool, the Family Care Map, to standardize and promote family-centered care. The tool was implemented as a six-month pilot, available to both families and staff. Implementation including overall project planning, customizations for each service site, awareness and support generation, polytrauma educational support, and development of policies and practices tools.

To measure the outcomes of this initiative, the QIC conducted a provider survey of family care, including questions on satisfaction with family care, and perceived competence in working with families. The researchers also tracked specific practice changes at each site, monitored provider and facilitator perceptions of the collaborative work, and validated measures in order to predict likelihood of success.

The main results signify family-centered practices and satisfaction improved among rehabilitation interdisciplinary team members at sites with lower baseline scores ( $P_s < 0.05$ ) and was equivalent across sites after the pilot. Providers initiated specific family-centered practices that were often initiated at one site and subsequently adopted by other sites throughout the collaborative. Sites standardized topics for family education and methods for family and team collaboration. Providers believed that the collaborative produced a “culture change” from patient-centered to family-centered care and viewed program leadership and health services researchers' involvement as crucial for success.

In conclusion, collaboratives that bring together clinicians, program leaders and researchers may be useful for fostering complex change involving interdisciplinary teams. Going forward, the Family Care Map will be migrated to the Polytrauma System of Care website. QIC will continue to test practice changes and evaluate efficacy with family caregivers.

### ***FAMILY AND CAREGIVER EXPERIENCES WITH POLYTRAUMA: PRELIMINARY FINDINGS FROM THE FACES STUDY***

*Dr. Joan M. Griffin, PhD, Center for Chronic Disease Outcomes Research, Minneapolis Veterans Affairs Medical Center; Department of Medicine, University of Minnesota*

- FACES (Family and Caregiver Experience Survey) is a cross-sectional study designed to describe the physical, emotional, and financial burden/rewards of caregiving in OEF/OIF populations
- Early results show that caregiver burden with respect to role and financial strain is significant
- 59% of caregivers currently working for family income 25% care for another family member or young child at home, and 12% reported both working for income and caring for another family member along with caring for a polytrauma family member



Research on stroke, dementia and cancer patients suggests that family functioning and support can predict patient quality of life and health outcomes. The research also suggests that caring for a family member with polytraumatic injuries (PT) results in caregiver distress.

Unfortunately, little is known about how families function after a service member or veteran has sustained PT injuries that include TBI. As polytrauma patients are discharged from acute-care, inpatient facilities, long-term, caretaking responsibilities often shift to informal caregiving from families.

To fill the knowledge gap, the FACES study was designed to describe the physical, emotional, and financial burden (and rewards) of caregiving, as well as outline the resources available to caregivers. This research is a cross-sectional study of family members of TBI/Polytrauma OEF/OIF service members. Study candidates, identified through patient records, were primary caregivers of discharged PT patients who had three months or more lengths of stay at a TBI rehab or PRC between 2001 and 2009. The methodology included a mailed survey to these candidates and sixteen in-depth interviews with selected survey respondents. The surveys included questions on a wide range of caregiver issues including objective care burden, subjective care burden, family role strain, financial strain, caregiver physical and mental health, social support, and more.

The preliminary response rate is 53% with 558 respondents, of which 304 provided sufficient data for analysis. There has been a low refusal rate of 4% thus far; however, 38% of surveys remain outstanding. 50% are male and 50% are married. 45% of the caregivers reported that their loved one was injured in the U.S., and 43% in Iraq. Forty-five percent of caregivers reported the cause was motor vehicle accidents, followed by a blast. Injuries reported include TBI (100%), fractures (47%), injuries to the face (37%), wounds (35%), injuries to internal organs (17%), spinal cord injury (11%), burns (7%), amputation (5%), and other (18%)

The early results show that caregiver burden with respect to role strain is significant. 59% are currently working for pay, 25% care for another family member or young child at home, and 12% reported both. Of working caregivers, 22% reported no role strain, and 36% scored in the top half on an index measuring role strain. Financial strain is also significant. 49% have terminated employment or reduced their paid hours in order to manage care for their loved one. 56% of those who are not currently working report that the reason is in order to care for the survivor. Fifty-nine percent report using their savings in order to pay the costs of caring, and 11% report using money from retirement accounts to help pay for care.







### SEEKING SAFETY

*Dr. Lisa M. Najavits, PhD, Boston University School of Medicine; Harvard University Medical School; Mclean Hospital; National Center For PTSD, Veterans Affairs Boston Healthcare System*

- Seeking Safety is evidence-based cognitive behavior therapy (CBT) for psychoeducation and coping skills in trauma and/or substance abuse population
- Vast evidence based in support of Seeking Safety
- Strives to build hope through emphasis on ideals, “Asking for Help”, “Creating Meaning”, “Compassion”, and “Healing from Anger”

Seeking Safety (also known as Seeking Strength in the military community) is an evidence-based therapy for trauma and/or substance abuse. It is a present-focused CBT approach offering psychoeducation and coping skills to help patients attain greater safety in their lives. It was designed for flexible use: men or women; any format; all types of trauma and substances; acute and chronic conditions; and full or sub-threshold disorders. It is also an easy, low cost intervention, requiring virtually no training. It is very safe evidence-based practice, and it has been used for over 15 years with a broad range of patient populations, with positive outcomes in men, women, and adolescents.

The evidence base for Seeking Safety is vast:

8 pilot studies (Phase I)	
Men and women veterans	Cook et al., 2006
Women veterans	Weller, 2005
Women outpatients	Najavits et al., 1998
Women in prison	Zlotnick et al., 2003
Women in community treatment	Holdcraft et al., 2002
Men outpatients	Najavits et al., 2005
Young African-American men	Hamilton, in preparation
Women in community treatment	Young et al., 2004
3 controlled trials (Phase II)	
Low-income urban women	Hien et al., 2004
Adolescent girls	Najavits et al., 2006
Women in community treatment	Gatz et al., 2007
3 multisite trials (Phase III)	
Homeless women veterans	Desai et al., 2008, 2009
Women with co-occurring disorders/violence	Morissey et al., 2005
Women in community treatment	Hien et al., 2009
2 dissemination studies	Hills et al., 2004 Brown et al., 2007

There are up to 25 treatment topics, cognitive, behavioral, and interpersonal. Each topic focuses on a safe coping skill relevant to both PTSD and SUD, such as “Asking for Help”, “Creating Meaning”, “Compassion”, and “Healing from Anger”. Topics can be done in any order and the treatment can be done in few or many sessions as time allows. Each session follows a similar format, with check in on





current status, quotation reading for emotional engagement, content relating to current and specific patient challenges, and finally check out to reiterate learning and new commitments.

Seeking Safety strives to build hope through emphasis on ideals; it uses simple, emotionally evocative language and quotations to engage patients; attends to therapist processes; and offers concrete strategies that are believed essential for this population (e.g., case management and a clear session structure).

### ***HEALTH RESOURCES AND SERVICES ADMINISTRATION (HRSA); THE FEDERAL TRAUMATIC BRAIN INJURY (TBI) PROGRAM***

Captain Janie Martin Heppel, Federal Traumatic Brain Injury Program, DHHS/HRSA/Maternal and Child Health Bureau

- Federal TBI Program, operated by HRSA, administers grants to make sure proper TBI care and services are made available across the country
- TBI Technical Assistance Center established to provide State Implementation Partnership for achieving TBI education and awareness missions.
- 2006 IOM Study of HRSA program stated that "has produced demonstrable, beneficial change in organizational infrastructure and increased the visibility of TBI"

While OEF/OIF populations have brought much-needed attention to TBI, they comprise a small portion of the U.S. TBI population. Approximately 90,000 individuals in the U.S. sustain a TBI with long term, sometimes lifelong consequences. TBI is the leading cause of death and disability among children in the U.S. Current prison studies indicate that 60-80% have TBI prior to incarceration. The estimated annual cost TBI across the U.S. is more than \$60 billion and likely to rise. Individuals with TBI may have trouble getting basic services, such as health care, rehabilitation, transportation, employment assistance, and housing. Insufficient understanding of TBI, low awareness of support services available, difficulties with diagnosis, and other barriers can keep TBI patients from receiving proper care.

In 1996, Congress established the Federal TBI program to address this gap. The HRSA, part of the U.S. Department of Health and Human Services, operates this Federal program and has administered grants to organizations in nearly all 50 States, the District of Columbia, and several territories to help make sure proper care and services are made available across the country. Building off its \$9 million budget, the program has made significant strides in ensuring that individuals with TBI and their families receive the comprehensive care and services they need to manage ongoing conditions caused by the injury.

In 1997, HRSA created a TBI Technical Assistance Center to provide State Implementation Partnership with information and resources to achieve their missions of educating and training providers to recognize a TBI, encouraging providers to connect TBI patients and families to appropriate services, establishing advisory boards to coordinate TBI services, developing eligibility criteria, creating TBI detection screening tools, and educating communities on TBI literacy.

HRSA's other grantees include protection and advocacy programs. Their mission is to provide advocacy training, information and referral services, as well as legal help for those with TBI. Because of this advocacy work, individuals with TBI have been able to stay in their own homes, keep their jobs, and receive reasonable accommodations that have allowed them to lead higher quality lives.

The 2006 IOM Study of the HRSA program stated that it "has produced demonstrable, beneficial change in organizational infrastructure and increased the visibility of TBI—essential conditions for improving TBI service systems."

About two years ago, DoD was charged by Congress to create a DoD Health Board Subcommittee tasked with creating a "Curriculum for Caregivers" of service members with a TBI. The result is an always-available interactive website titled "A Caregiver's Guide to TBI: The Journey to Recovery." It includes four modules, 1) Introduction to TBI, 2) Understanding the Effects of TBI and What You Can Do to Help, 3) Becoming a Family Caregiver for a Service Member/Veteran with TBI, and 4) Navigating Services and Benefits.

### ***FAMILIES OF RURAL OEF/OIF VETERANS WITH TBI: CONCERNS AND ISSUES***

*Dr. Linda Nichols, PhD, Memphis Veterans Affairs Medical Center; Departments Of Preventive And Internal Medicine, University Of Tennessee Health Science Center At Memphis*

- 18% of the OEF/OIF population report mild TBI (mTBI)
- Health Services Research and Development Service conducted study to better understand challenges faced by families of mTBI veterans
- Results showed need for mTBI education among veterans and their families
- Families often in denial of mTBI diagnoses, feel stigmatized

Approximately 300,000 (18%) OEF/OIF military personnel have been reported to have mTBI. The management of mTBI can be difficult for families because findings are often inconsistent. In a small pilot study funded by the Health Services Research and Development Service to examine expanding support for TBI families, qualitative interviews were conducted over a six month period (October 2008 to April 2009) with six rural TBI families, who all lived in rural areas. Veterans were 1-5 years post- injury with mild or moderate TBI and co-morbid post traumatic stress disorder diagnoses. Family members included spouses, mothers, and a grandmother.

The interviews showed that, despite previous information and interactions with DoD and the VA, there is substantial need for mTBI education around the condition, prognosis, and sequelae. Families need support with basic understanding of mTBI, problem solving, managing changes, coping, preventing unsafe or frightening behavior, and grief management. Likewise, families often are unaware of the support resources available to them through DoD and the VA. Families are also unaware of the likelihood of comorbid PTSD.



More troublingly, families are often in denial about diagnoses, and homecoming euphoria may mask symptoms. Likewise, families decline expanded support due to privacy, independence, and negative employment repercussions if TBI deficits became known in the community. Furthermore, mTBI survivors are unsure about their future across a wide number of attributes, including the disease itself, awareness of comorbid PTSD, and employment and finances. Many mTBI survivors continue to work and hide their disease out of fear or financial and retirement savings impact.

### ***TRAUMATIC BRAIN INJURY: A GUIDE FOR CAREGIVERS OF SERVICE MEMBERS AND VETERANS***

*Meg Campbell-Kotler, MPH, RN, Office of Education, Defense and Veterans Brain Injury Center*

- Congress established the Traumatic Brain Injury Family Caregiver Panel to improve the standardization of family education and training in military TBI populations
- Panel formed an evidence-based curriculum with four modules and a caregiver companion, designed to assist caregivers in staying current with medications, appointments and members of the health care team
- Curriculum will also be available in multimedia on online at [www.traumaticbraininjuryatoz.org](http://www.traumaticbraininjuryatoz.org)

In Section 774 of the National Defense Authorization Act of 2007, Congress began work to lower the barriers hindering family caregivers of service members suffering from TBI. The legislation established a fifteen-member Traumatic Brain Injury Family Caregiver Panel "...to develop coordinated, uniform, and consistent training curricula to be used in training family members in the provision of care and assistance to members and former members of the Armed Forces with traumatic brain injuries."

The panel, whose appointees the White House approved in March 2008, brings together TBI clinicians, family caregiver associations, DoD and VA professionals, family training experts, and families struggling with TBI. The panel's responsibilities are to review TBI literature, form a curriculum evidence base, develop a consistent curriculum for TBI caregiver education, and recommend dissemination and awareness strategies. The goals of the Curriculum are to be informative and accurate, to provide support to the caregiver on the journey to recovery, to provide the caregivers with TBI symptoms management skills, to provide assistance in communicating with health care professionals, and to be user friendly, culturally-appropriate, and relevant to real-life needs and experiences.

For the purposes of this Curriculum, a family caregiver is any family member or support person(s) relied







upon by the service member or veteran suffering from sustained TBI, who assumes primary responsibility for ensuring the needed level of care and overall well-being of that service member or veteran.

In October 2009, the panel completed the Curriculum with approval from the Defense Health Board. The curriculum consists of four modules and a caregiver companion, designed to assist the caregiver in staying current with medications, appointments and members of the health care team. Module 1 focuses on the anatomy and function of the brain, causes and types of TBI, diagnosis and treatment, possible complications, the recovery process, and helpful suggestions. Module 2 moves on to review TBI effects and treatment, including physical, cognitive, communication, behavioral, and emotional effects. It also reviewed practical strategies and frequently asked questions. Next, Module 3 addresses the caregiving journey, beginning with caring for the TBI patient, through becoming a TBI advocate, encouraging the caregiver to take care of themselves, helping the children in the family cope with TBI, and transitioning and planning for the future. The final module, Module 4, focuses on the TBI continuum of care. This section is designed to help caregivers become familiar with resources available, including support for health, counseling, employment, education, housing, and legal and financial issues.

Furthermore, the Curriculum also includes a Caregiver Companion which serves as a practical toolkit for caregivers, including a glossary (with military ranks and terms), contact information, medication logs, home care team volunteer forms, caregiver worksheets, and business card and CD holders.

In addition to print form, the Curriculum will also be available in multimedia on online at [www.traumaticbraininjuryatoz.org](http://www.traumaticbraininjuryatoz.org). Developed in cooperation with the Center of Excellence for Medical Multimedia, this presentation provides a history of the curriculum development process, an introduction to the curriculum content, and caregiver feedback and proposed dissemination plans.

The feedback to the Curriculum has been "extremely positive." Both new and experienced caregivers learn something new. Positive remarks have been received on the layout and design, with students finding the program very easy to navigate. Likewise, users of the Curriculum noted that the Curriculum should be provided to other caregivers as early as possible as it truly addresses the key issues of caregiving experience.

The Panel recommends that the Curriculum be disseminated by providing the print document to all caregivers of severe-to-moderate TBI service members. They recommend beginning with those currently in the military and VA health systems, followed by an outreach campaign for those who sustained TBI earlier in OEF/OIF conflicts. Likewise, the panel recommends a targeted effort for TBI family caregivers from the National Guard and non-active-duty Reservists. In addition, education campaigns should be developed for providers, advocates, and Curriculum handlers. Finally, the Curriculum should be translated into Spanish.



### Track 2: Child and Adolescent Development

The presentations in the second track of the afternoon session of the conference agenda provided participants with an overview of the characteristics of child and adolescent development and identify how parental military deployment, service and reintegration affect overall family adjustment and well-being.

Moderators:

*Dr. Valerie Maholmes, PhD, CAS, Child Development & Behavior Branch, National Institute of Child and Human Development, National Institutes of Health*

*Susan Salasin, Women and Violence Program, Center for Mental Health Services; National Center for Trauma-Informed Care*

### **VOICES OF CHILDREN AND ADOLESCENTS IN MILITARY FAMILIES: RESEARCH AND CLINICAL PERSPECTIVES ON ADJUSTMENT AND WELL-BEING**

*Dr. Eric M. Flake, MD, FAAP, Major, United States Air Force Medical Corps*

- Military dependents, spouses and children, outnumber active-duty and reserve military force
- Families and children stressed much more than previous generations
- Normal child development challenged by deployment, increased anxiety around deployment, family integration, prioritized military service over family, fear of mental health stigma, and frequent relocations
- Wide range of responses in youth struggling deployed parents, including sadness, anger, withdrawal, sleep disturbance, anxiety, aggressiveness, insecurity, and no notable reaction

First time in history, the number of military dependents (spouses and children) outnumbers the military force (active duty and reserve). Over a third (38%) of active-duty members are married with children, and almost two thirds (58%) of active-duty members have family responsibilities. Additionally, 5.8% of active-duty members and 8.2% of Reserve and Guard members are single parents. The Reserve and Guard are an older fighting force, but as they are deployed at much higher rates, they are no longer are they the "weekend warrior." As a result of OEF/OIF deployments, their families and children have been stressed much more than in previous generations. Lastly, over 70% of military children are under 10 years of age.

To better understand the impact of military service on children and adolescents, it is important to not only focus on the clinical and research practices, but also on the stories and voices of children in military families. To better serve this population, health care professionals must have a clear understanding of the range of child responses to deployment stresses, the recent clinical literature identifying the



cumulative stresses on children and families, the resources available at each stage of child development, and the collaborative role of the community in providing support.

There are many strengths and challenges to the military environment for children and adolescents. The military youth culture exhibits strong values of service and sacrifice around along with their military parent. However, it is essential to note that their service and sacrifice is an imposed condition made by their parent's work preference. It also goes without saying that each child's experience is unique. There are significant strengths of military environment for youth, including a cohesive community, a true sense of duty and mission, an emphasis on education, a wide range of mental health and counseling resources, parental job security, and military benefits (e.g., amusement park discounts, tax benefits, universal healthcare, etc.) Nevertheless, the challenges to youth from the military environment are profound. Deployment itself, an increased sense anxiety around deployment, integration of the family, military service prioritized before family, fear of mental health stigma, and frequent relocations are all challenges to normal child development.

For the next ten to fifteen years, military deployments will remain frequent, and as such, the challenge is converting the parent's deployment as much as possible into a stepping stone from a stumbling block for the child. Traditionally, military families have coped well with temporary separations. There are three primary emotional stages of the deployment cycle for children, pre-deployment, deployment, and reunion. During pre-deployment, which could be 6-12 months before the deployment, children are stressed with "micro-deployments" for the parent's training. During deployment, typically 12-15 months, children face the key opportunities and challenges that build resiliency and coping. Finally, reunion can occur and last for up to 12 or more months. There is a wide range of possible responses in youth struggling with parents being deployed, including but not limited to, sadness, anger, withdrawal, sleep disturbance, anxiety, aggressiveness, insecurity, and even no notable reaction. Boys and younger children are more susceptible to the effects of deployment, with many affected by maternal adaptation. Children can also be affected by maternal depression. Those in a lower socioeconomic status are at risk for child neglect as well as those having harder times coping in deployment.

Within the kindergarten to sixth grade time frame, 1 in 3 families with a deployed service member identify a school aged child at risk for psychosocial morbidity (twice national normative levels). High parenting stress levels were up to 50% (twice national normative data during deployment). In this area, there is a need for additional research, longitudinal in nature and with control groups. Within the different youth age groups, there are varying trends in reactions. In the 0 to 5 years of age (pre-K), youth experience higher emotional and behavioral problems.

Despite these stressors, some families exhibit strong resiliency. There remain high levels of cohesion in military families. In the active duty population, 71% of spouses with children surveyed plan to stay in the military until retirement. There for, there are a number of strategies that should be deployed to



support these families, including family readiness groups, free and low cost child care programs, youth outreach programs, and expansion of military school liaison officers.

Likewise, three video intervention packages are available for those who do not live on bases. This media has been developed by age group (preschool, child, and teen). For 3 to 5 year olds (preschool), the program is titled "Talk, Listen, Connect," for 6 to 11 year olds (child), "Mr. Po and Friends Discuss... Family Reunion after Deployment," and for 12 to 18 year olds (teen), "Military Youth Coping with Separation: When Family Members Deploy." These videos aim to sensitize the community to military adolescent culture and support needs. They contain candid interviews occurring at Camp Purple, capturing the true feelings and coping strategies of military youth. The videos accentuate the resiliency of military children and recognize their service and sacrifice to the Nation.

### ***IMPACT OF PARENTAL COMBAT DEPLOYMENT ON CHILDREN, SPOUSES AND SERVICE MEMBERS: ASSESSMENT TO GUIDE INTERVENTION***

*Dr. Patricia Lester, MD, Families OverComing Under Stress (FOCUS), UCLA Semel Institute, UCLA Child And Family Trauma Psychiatry Service, UCLA School Of Medicine*

- Study designed to research effects of parental wartime deployments on school aged children
- Caretaker stress was much higher during deployment
- 30% of children exhibited significant anxiety symptoms
- Correlation between number of months deployed and children with depression and caretaker distress



Needless to say, early experience matters for child development. As such, counselors and mental health professionals should synthesize the literature on trauma loss, cumulative stress, and deployment. There is a strong role of relationships in early child development, impacting brain development, emotional regulation and neurophysiology, and security of attachment. Likewise, research has shown that adversity in the form of parental depression, trauma and loss, and cumulative stress have significant impact. Given the additive nature of all these stressors, the impact of deployment on child development should be viewed not a cycle, but as spiral.

This study, titled "Assessment of School Aged Children Affected by Parental Wartime Deployments" and currently in review, aims to increase the understanding of the effects of parental wartime deployments on school aged children, and subsequently aspires to design information to enhance interventions for military children and families facing combat operational stress injuries. To this end, military child assessments were developed in order to (1) assess behavioral and emotional adjustment outcomes among school age children (ages 6-12) with an Active Duty military parent, either currently deployed to combat theatre or recently returned in the last 12 months from combat theatre; (2) assess the impact of parental combat deployment duration on child and family psychological symptoms; and (3) assess the impact of parental distress on child psychological symptoms. Three assessments were



developed. The first, a child self-report, was based on Children's Depression Inventory-II (CDI; Kovacs, 1992) and Multidimensional Anxiety Score for Children (MASC; March, 1997). The second, parental report on their children, was based on the Child Behavior Checklist (CBCL; Achenbach, 1991). Finally, the third, a parent self-report, was based on the Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983), and Posttraumatic Stress Diagnostic Scale (PDS; Foa, 1995). The sample included 272 Army and Marine Corps children and their parents, 187 recently deployed and 85 currently deployed, with an average age of 8.53, experiencing an average 1.65 deployments, amounting to an average 16.66 months.

The results of the parental assessments show that there is a stark difference between recently returned and currently deployed parents, as the caretaker stress was much higher during deployment. Within the group measured during deployment, 20% experienced PTSD symptoms, with prominent findings of anxiety. The results of the child assessments show that the rates of self-reported depression and parent report were very similar to national normative data. About 30% of children exhibited significant anxiety symptoms, in particular anxiety related to separation and experiences of physical symptoms. Upon their service member's return, this rate of anxiety decreased, but not significantly. Upon reviewing the number of combat months over the child's lifetime, there was significant correlation between number of months deployed and reporting of children with depression and caretaker distress.

Both Army and Marine Corps children who have experienced any parental and combat deployments demonstrate indices of resiliency in emotional and behavioral adjustment compared to community norms. However, children affected by parental wartime deployments have significantly increased levels of anxiety symptoms compared to community norms on self-report measures. Approximately one third of non-active-duty parents report clinically significant symptoms of distress as a result of wartime deployment, with significantly greater distress reported during spouse deployments compared to recent return.

The data indicated two key risk factors for children. First, the cumulative months of parental combat deployment during the child's lifetime is significantly associated with both depressive symptoms and externalizing symptoms. Second, parental psychological symptoms are strongly associated with child psychological symptoms across multiple outcomes.

These findings underscore the need for family-centered and targeted preventive interventions for children and families. Further research is required for young children, ages 0 to 6; variations across age and gender; and longitudinal study.

### ***DEPLOYMENT THROUGH THE EYES OF ADOLESCENTS: EXPLORING VULNERABILITY AND RESILIENCE***

*Dr. Angela Huebner, PhD, Department of Human Development, Virginia Polytechnic Institute*  
*Dr. Jay Mancini, PhD, Department of Human Development, Virginia Polytechnic Institute*

- Studied vulnerability/resilience of adolescents in OEF/OIF deployment populations
- Focus groups indicated that high adjusters understood that change and adaptation were necessary, placed their situation into context
- Research also uncovered several parenting strategies improve coping, chiefly making meaning of deployment for adolescents





Until the age of 25, the brain's prefrontal cortex is still under construction. These continual changes may affect adolescents' ability to deal with deployments and redeployments. Therefore, in 2004, research began into the vulnerability and resilience of adolescents experiencing current or recent OEF/OIF deployment and redeployment. The new culture of continual redeployment deprives families of any downtime. Adolescents frequently note that if the parent is not deployed, the parent is preparing to be deployed, regardless of official orders. The adolescent's vulnerability encompasses the experience, situation, and characteristics that expose them to additional negative experiences and outcomes. Likewise, resilience is a dynamic process encompassing positive adaptation despite significant adversity. OEF/OIF experiences affect adolescents in three main ways, through family uncertainty (before, during, and after parental deployment), family reorganization, and family change and continuity.

In order to identify specific causes of vulnerability and resilience relating to deployment, family coping studies were organized using a double ABC-X Model of Adjustment, with A defined deployment (the major event), B as resources (including protective, interpersonal, contextual, and formal factors), C as cognition and meaning of experience, and X as the reactions and adjustments.

The first study investigated adolescent adjustment during parental deployment. This research from 2004 was focus group oriented, involving 14 focus groups and 107 youth between the ages of 12 and 18. The second study investigated the impact of multiple deployments. This 2008 study involved 11 focus groups and 85 adolescents, between the ages of 11 and 18. Indicators of adjustment (X) were defined as changes in mental health, increased family conflict, increased parental relationship conflict, and coping strategies exhibited.

The results of the focus groups indicated that high adapters understood that change and adaptation were necessary. They placed their situation into context and were less likely to internalize stress, handling it more productively. They were involved in less interpersonal conflict with family. On the other hand, lower adapters, expressed more emotional responses to deployment, made greater expressions of violence and aggression, reported greater levels of conflict, and were less likely to feel their friends understood their situation. Both low and high adapters reported that their grades suffered as a result of deployment worries, that adults inappropriately disclosed war particulars, and that they were very distracted by deployment-related worry.

The adolescents in the focus group reported their experiences with the effectiveness of formal and informal support networks. Informal supports, such as parents, grandparents, and friends were helpful in providing a chance to release tension or by diverting their attention from a situation over which they had no control. However, they were not always helpful, and sometimes felt inauthentic or voyeuristic. Likewise, formal support resources, such as youth and church groups, received mixed reviews as they were perceived to lack individuals who truly understood the adolescents' struggles.

The research also uncovered several parenting strategies improving coping and making meaning of deployment for adolescents. One key in meaning making is in how the young individuals were told about a deployment (e.g., some found out via an



answering machine message, some parents were open and transparent with kids, others began to emotionally separate from the time of notification). Parents should be helped to understand that accepting deployment as a part of military life can help the family cope. They should be educated on indicators of adolescent adjustment. For example, a change in an adolescent's grades can be an indicator of difficulty adjusting to deployment. Parents should also understand that adolescents perceive the absence of a parent as difficult, whether it comes in the form of a training, mobilization or deployment. Furthermore, parents must be educated on appropriate strategies for coping with deployment. Denial of the reality of deployment can be counterproductive. Talking about the deployment can help normalize the experience for all family members. Likewise, parents should understand the importance of maintaining consistent expectations and family patterns, activities, and rituals. If changes to routines must be made, it is helpful to involve adolescents in the discussion.

Before the deployment, parents should do their best to *prepare their adolescent* for the parent's absence by talking about the situation and what everyone can do to cope. Upon return from deployment, *discussions with the deployed parent should resume* and included how adolescents have changed and what new responsibilities they have undertaken. In addition, parents should educate their adolescents on *normative responses* to having a parent deployed, such as worry and poor concentration. There are many additional strategies and nuances; however, the above form the foundation for improving adolescent resilience and minimizing vulnerability.

### ***FOCUS (FAMILIES OVERCOMING UNDER STRESS): A FAMILY-CENTERED PREVENTION PROGRAM FOR MILITARY CHILDREN AND FAMILIES FACING COMBAT OPERATIONAL STRESS***

*Dr. Patricia Lester, MD, Families OverComing Under Stress (FOCUS), UCLA Semel Institute, UCLA Child And Family Trauma Psychiatry Service, UCLA School Of Medicine*

- FOCUS Project developed to address the impact of multiple deployments and combat stress injured on children and families
- Adapted from evidence-based, family-centered Interventions for children with depressed parent, children with medically ill parent, children affected by war, and children affected by parental combat deployments
- Develops family-level resiliency skills--goal setting, problem solving, emotional regulation, and managing reminders of combat or deployment
- Demonstrated that a family-centered targeted prevention program is both feasible and effective for military families

FOCUS was initially developed for United States Marine Corps children and families at MCB Camp Pendleton. In March of 2008, the Navy Bureau of Medicine and Surgery (BUMED) funded the UCLA Semel Institute and the National Center for Child Traumatic Stress to implement the FOCUS Project for United States Navy and Marine Corps families in order to address the impact of multiple deployments and combat stress injuries on children and families. In 2009, FOCUS Family Resiliency Training Services were made





available to Army and Air Force families at selected installations through support from the Defense Department's Office of Family Policy. Under UCLA leadership, FOCUS services augment existing military medical and family support programs in order to provide targeted prevention services that support family readiness and wellness, and enhance access to a continuum of psychological health services for service members, families and children.

FOCUS was adapted from evidence-based, family-centered Interventions, centering around children with a depressed parent (Beardslee et al., 2003), children with a medically ill parent (Rotheram-Borus et al., 2001, 2004, Lester et al 2008), children affected by war (Layne, Saltzman, Pynoos 2008), and children affected by USMC parental combat deployments (Saltzman & Lester, 2006). FOCUS services target three populations for prevention interventions, including all families, selected families, and families with indications. The program is designed to address a range of stressors including (1) the impact of multiple combat deployments, (2) the effects of combat operational stress including psychological and physical injuries, and (3) the high operational tempo on children and families.

FOCUS has integrated the Combat Operational Stress continuum model to support family-level self-assessment, developmental guidance, and trauma-informed psycho-education. FOCUS develops family-level resiliency skills, including goal setting, problem solving, emotional regulation, and managing reminders of combat or deployment. The program strives to link skills to family experience, develop shared family meaning, and bridge any estrangements or parenting gaps. FOCUS also employs a web-based, real-time family check-up assessment and immediate feedback that customizes the intervention to the family's strengths and challenges, and provides ongoing quality assurance for standardized delivery.

FOCUS has demonstrated that a family-centered targeted prevention program is both feasible and effective for military families. Family functioning for FOCUS families under the McMaster Family Assessment Device had highly significant improvements between initial and exit FAD subscale scores on all domains ( $p < .0001$ ). Child coping skills, as tested by self-report inventory in children (ages 6 to 18) increased significantly in FOCUS families in all categories, lead by problem solving ( $p = .0001$ ), emotional regulation ( $p = .005$ ), and cognitive restructuring ( $p = .016$ ). Likewise child behavioral and emotional adjustment improved, as measured by a strengths and difficulties questionnaire. There were reductions in behavior and conduct problems ( $p < .0001$ ); reductions in emotional symptoms ( $p = .001$ ), such as anxiety and depressive symptoms; and improvements in child prosocial behaviors ( $p = .01$ ). Parent psychological health, as measured by self-report inventory 1 to 4 months after intervention, also saw significant improvement. There were strong reductions in overall parental emotional distress ( $p < .01$ ), depression ( $p < .01$ ), anxiety ( $p = .002$ ) and somatic complaints ( $p < .001$ ).

The FOCUS program also uncovered best practices for other interventions seeking to build a foundation for sustainability. FOCUS succeeded due to its required standardization, practical feasibility and portability, integration into a collaborative system of care, implementation flexibility, and rigorous program evaluation for quality improvement. Program standardization included user-friendly manuals and training, rigorous training and supervision standards, and a clearly outlined process for customization to address unique needs of individual family, military branch, and individual installation. Utilizing national and local partnerships, community outreach, and flexible and family friendly skills-based approach, FOCUS has successfully initiated a resiliency training program in collaboration with the military community. FOCUS has demonstrated that a strength-based approach to building child and family resiliency skills is well received by service members and their family members reflected in high satisfaction ratings. Notably, program participation has resulted in significant increases in family and child positive coping and significant reductions in parent and child distress over time. Standardization in program implementation provides the foundation for FOCUS program implementation and sustainability to support larger scale dissemination.



### *MILITARY COMMUNITY & FAMILY POLICY INITIATIVES IN SUPPORT OF FAMILIES & CAREGIVERS*

*David Kennedy, Captain (Ret), United States Navy*

- DoD provides several resources through Military Community and Family Policy (MC&FP) to support military members
- Services include non-medical counseling, referral to local counseling, Joint Family Support Assistance Program networks, DoD Child Development System childcare, youth programs, and Department of Defense Education Activity (DoDEA) instructional programs
- Wounded Warrior Resource Call Center is available 24/7 for immediate assistance to service members or families

The Office of the Deputy Under Secretary of Defense for MC&FP oversees the DoD commitment to provide a high quality of life to those who serve our country. To this end, the MC&FP's goals are to (1) sustain a motivated, combat-ready force that can meet the military's demanding deployment schedule, and (2) facilitate the development of a network of support for military families. The DoD's guiding family philosophy is that families also serve, families embolden troops on the battlefield, and families impact service members' decision to stay in the military.

There are several initiatives and resources provided by the MC&FP to support military members and their families. Military OneSource is heart of the program. It helps to provide a "one-stop shop" for information and resources addressing the challenges facing the well-being of service members and their families

Firstly, non-medical counseling is available through Military OneSource and the Military Family Life Consultant Program. It is private and confidential. There is also the option of referral to local counseling professionals. These services are available at no cost to service members or family members, and are available for delivery on and off the installation. Likewise, the Joint Family Support Assistance Program networks serve families by providing information and referrals to community services and support.

The DoD Child Development System includes 800 childcare facilities and 6,083 family child care homes at 300 military installations worldwide. The System serves children from ages of 0 to 12 years. It is recognized as a model for the nation, with high standards, staff background checks, specialized staff training requirements, and improved wages. The system is currently undergoing expansion, with construction of new centers, partnerships with providers off







installations, and strategic outreach to recruit and retain a robust workforce.

The MC&FP also provides a wide range of youth programs. Currently, there are more than 350 programs for children ages 6-18, with the goal of promoting positive youth development. For example, the Military Youth on the Move program provides youth with creative ways to cope with challenges related to moving (<http://apps.mhf.dod.mil/myom>). The Mission Youth Outreach initiative allows geographically dispersed active, Guard, and Reserve youth to attend a local Boys & Girls Club at no cost to the family. Third, Operation Military Kids is an initiative with the 4-H that supports military kids impacted by deployment and those geographically dispersed from the military.

The DoDEA provides a comprehensive instructional program for children in pre-kindergarten through 12th grade. Since 2007, the DoDEA shares experience with local education agencies (LEAs), who educate the 92% of military students attending civilian schools. DoDEA also provides a vehicle for states to follow common guidelines in handling issues that impact children of military families as they transition between schools. Furthermore, in partnership with DoDEA, the American Association of School Administrators, has developed an online communication toolkit, "Supporting the Military Child" that provides important messages about deployment and transition, and will provide school administrators tools, resources, and information to support military students ([www.aasa.org/MilitaryChild.aspx](http://www.aasa.org/MilitaryChild.aspx)).

There are also vast resources for wounded warriors. The Wounded Warrior Resource Call Center is available 24/7 to provide immediate assistance to service members or families with issues related to health care, health facilities or benefits for the wounded. In addition, the National Resource Directory is an online tool for wounded, ill and injured service members, veterans, their families, and those who support them, providing access to more than 11,000 services and resources at the national, state and local levels that support recovery, rehabilitation and community reintegration ([www.nationalresourcedirectory.org](http://www.nationalresourcedirectory.org)).

Lastly, the Military HOMEFRONT (MHF) is a key source for official DoD quality of life information ([www.militaryhomefront.dod.mil](http://www.militaryhomefront.dod.mil)). MHF focuses on tools and resources for service providers and leadership, including official DoD policy. It also helps coordinate access to military installations.

### ***ASSESSMENT-BASED TREATMENT FOR TRAUMATIZED CHILDREN: USING THE TRAUMA ASSESSMENT PATHWAY (TAP) MODEL***

*Dr. Lisa Conradi, PsyD, Hadwick Center for Children and Families, Rady Children's Hospital*

- Trauma Assessment Pathway (TAP) is an assessment-based treatment manual for traumatized children ages 2 to 18 years
- Incorporates assessment data collection, clinical interviewing, and observation to create a Unique Client Picture
- Three components to TAP--assessment, triage, and treatment
- TAP treatment incorporates several common fundamental components of trauma treatment into the Trauma Wheel-- it affects regulation, skill building and psychoeducation, addressing cognitive distortions, systems dynamics, and trauma integration

TAP is an assessment-based treatment model developed by the Chadwick Center at Rady Children's Hospital and Health Center in San Diego and has demonstrated effectiveness in clinic-based settings for treating children and adolescents between 2 and 18 years of age who experienced any type of



trauma. TAP incorporates assessment, triage, and evidence-supported components of trauma treatment into clinical pathways.

TAP is a treatment manual for traumatized children ages 2 to 18 years. It incorporates assessment data collection, clinical interviewing, and observation to create a Unique Client Picture. It includes specific components of trauma-specific treatment described by the Trauma Wheel. The manual and a web-based training on the model is available online ([www.taptraining.net](http://www.taptraining.net)). The TAP Model provides a framework to increase the capacity for treatment facilities to build and sustain an assessment-based treatment program, and TAP can help incorporate and integrate existing appropriate evidence-based treatment services. For children with complicated and complex trauma histories, TAP provides a clear guide for individualized trauma treatment.

There are three components to TAP, assessment, triage, and treatment. In the assessment stage, patients are evaluated to determine their appropriateness for a particular facility's TAP Model. During triage, the treatment modality that is best is selected based upon the Unique Client Picture and the evidence-based practices available. Finally, during the treatment phase, TAP incorporates common, fundamental components of trauma treatment into the TAP Trauma Wheel.

When using TAP, there are several domains that should be considered for inclusion in patient assessment and symptom measurement, each with their complementary inventory or tool. For child behavior problems, the CBCL is the most appropriate inventory; for child trauma symptoms, TSCL or TSCYC; for adult trauma symptoms, TSI; for child depression, CDI caretaker depression and CES-D; for caretaker anxiety, BAI and STAI; for parenting stress, PSI; for family functioning, FAM-III; and for substance abuse, DAST, AUDIT, or SASSI.

When working with the patient, forming the clinical hypothesis is a crucial first step. It is important to consider all assessment feedback and then determine the Unique Client Picture. Determining which family members to include in the treatment will require a strong understanding of the dynamics in the family. Likewise, developing support and buy-in from the family and patient is essential for treatment success. Finally, be certain to consider the cause of patient distress and symptoms. At this point, treatment goals are also written. They should reflect symptoms to be reduced or eliminated, as well as any safety and risk issues.

At its core, treatment triage involves selecting the modality that is best for the patient based upon the Unique Client Picture and the evidence-based practices available. Such practices include FOCUS, Child-Parent Psychotherapy, Trauma-Focused Cognitive-Behavioral Therapy, Parent-Child Interaction Therapy, and TAP Treatment Component. The TAP Treatment Component is designed for patients with complex trauma that do not readily align with other treatment models. It incorporates several common fundamental components of trauma treatment into the Trauma Wheel. These components include developmental issues, cultural issues, therapeutic relationships, systemic and attachment issues, behavioral problems, cognitive distortions, and making sense of the trauma. Irrespective of treatment modality, relationship building, child development, and culture hold the Wheel together and play a key role in understanding the child.

The first component of TAP Treatment is affect regulation, based on the assumption that there is a need to validate, understand, and experience feelings before resolution of those feelings can occur. To achieve this, affect regulation tasks include feeling identification and labelling, express feelings congruent with feelings you are identifying, experience and communicate feelings, appropriately manage range of emotions, develop positive self-feelings, and resolution of troubling emotions.



The next component is skill building and psychoeducation. An increase in information and skills should increase knowledge and adaptive functioning, as well as decrease uncertainty and increase normalization. Skill building and psychoeducation tasks include behavior management techniques, development of safety plans, enhancement of positive behaviors and social skills, relaxation techniques, psychoeducation, and communication and problem-solving.

Third is addressing cognitive distortions. Successful resolution of trauma involves cognitive processing of the experience. When inaccurate or maladaptive attributions are challenged and replaced with accurate and beneficial thoughts, feelings and behaviors can become more positive and adaptive. Tasks include identifying thought distortions, redefining attributions, identifying linkage between thoughts, feelings, and behaviors, and enhancing understanding of self-power.

Since children need their family system members to keep them safe and to provide support and nurturance throughout trauma treatment, systems dynamics is the fourth component. To improve this parent-child relationship, TAP recommends that treatment include trauma integration with appropriate system people, providing resources for caretakers, and developing parenting skills.

Finally, in the fifth component, trauma integration, TAP recommends creating a trauma narrative in order to help change cognitive misattributions and decreased intensity of reminders and negative emotions. Making sense of the trauma allows for a more positive view of themselves, their future, and the community in which they live. Patients should be encouraged to retell the traumatic story through various mediums. Treatment should include experiencing full range of emotions associated with trauma and corrective emotional reworking of the trauma.

TAP treatment should include ongoing reassessment in the form of weekly interviews and updated goals, progress notes, and follow-up standardized measures. The same measures must be used from each time period in order to track change over time. Measures may be added but must not be removed as treatment progresses.

The program was developed as children need their family system members to keep them safe. Including caretakers in treatment reinforces children's learned coping skills. Therefore, the program is designed to share trauma integration with appropriate family members and caretakers.

### Track 3: Family Functioning

The presentations in the third track of the afternoon session of the conference agenda provided participants with:

- a review of the impact of current and prior military service on adult relationships,
- a highlight of the success of novel interventions with improving relationships impacted by trauma, and
- details of the role of substance use in compounding family issues of persons with current or prior military service.

Moderators:

*Dr. Shirley M. Glynn, PhD, Office of Mental Health Services, Department of Veterans Affairs; VA Greater Los Angeles Healthcare System; UCLA Semel Institute*

*Dr. Carole Warshaw, MD, Domestic Violence & Mental Health Policy Initiative; National Center on Domestic Violence, Trauma & Mental Health*



### **FAMILY FUNCTIONING AND DEPLOYMENT/TRAUMA ISSUES**

*Dr. Steven Sayers, PhD, Department Of Psychiatry, University Of Pennsylvania School Of Medicine; VISN 4 Mental Illness Research; Education And Clinical Center, Philadelphia Veterans Affairs Medical Center (MIRECC)*

- War trauma not only affecting OEF/OIF service members, but also spouses, children, and extended family
- Research designed 1) to address link between trauma-related psychiatric problems and poor marital/family functioning; 2) to identify potential link between family psychiatric problems; and 3) to specific symptoms linked to reintegration problems
- Results show psychiatric symptoms correlate strongly with family reintegration problems
- "Complicated reintegration" is best phrase for reintegration interrupted by psychiatric difficulties

Due to the demographics of the service members now returning from OEF/OIF, the impact of war trauma is not only being experienced by millions of service members, but also their spouses, their children, and extended family members. Existing research strongly indicates that service members and veterans with combat related symptoms of depression and PTSD have the most difficulty reintegrating into their family. Research suggests that these symptoms have an impact on returning service members accomplishing several important developmental tasks: renegotiating family roles and influence of decisions, re-establishing family routines, and re-establishing emotional bonds with close family members. Existing evidence suggests that social withdrawal and numbing are more highly related than other types of symptoms to these difficulties.

A better understanding of family issues in the context of combat deployment is necessary in order to develop interventions that can decrease reintegration difficulties or increase the resilience of the service member and family members. Traumatic combat experiences have a negative impact on family interactions and the service member's reintegration. While family members are often a valuable source of support, they can also be a source of conflict. Family problems can complicate treatment of physical



and mental combat injuries, and family problems can increase the susceptibility of other family and mental health difficulties. Pre-deployment conflict and domestic violence can become much more severe after the service member returns. Certain demographics, such as early marriages and lower levels of education, can also increase vulnerability to family strife. Likewise, it is important to take into consideration family characteristics such as, marital stability, marital satisfaction, communication, conflict, domestic violence, flexibility of roles, cohesion, parenting, and demographic vulnerabilities.

The research was designed to address three questions: what explains the link between trauma-related psychiatric problems and poor marital/family functioning; are overall family problems associated with severity and prevalence of psychiatric problems; and what specific symptoms are associated with reintegration problems?

There were three parts to the methodology. First, OEF/OIF veterans who were referred from primary care for behavioral health evaluation and prompted by clinical screening (clinical reminder system) were evaluated by telephone at the Philadelphia VA Medical Center. Second, the telephone evaluation was analyzed along multiple measures, including PHQ-9 for depression, M.I.N.I. structured interview for other symptom domains, and alcohol and substance abuse screening. Third, review of the telephone evaluations for of family readjustment and domestic abuse concerns was conducted. Items classified under family readjustment were included.

The sample was comprised of a diverse study group of OEF/OIF veterans, with approximately three-fourths presenting with clinical depression, half with PTSD, and one-third at-risk for alcohol abuse. The mean age was 32.7, with 90% of participants being male. There was diversity in ethnicity with 32.2% black, 53.3% white, and 14.5% other race participants. 54.3% had children. 50.0% served with the Army, 17.1% with the Marines, 11.4% with the Navy, and 15.0% with the National Guard. The average days of return from combat was 585.6 days.

Results from this study indicate that psychiatric symptoms correlate strongly with family reintegration problems. Presentation of major depression correlates with a 2.6 times increased odds of being “unsure about responsibilities” and 3.6 times increased odds of “feeling like a guest in one’s own home” from the control. Likewise, presentation of PTSD correlated with a 3.2 times increased odds of “feeling like a guest in one’s own home” and 5.5 time increased odds of “children afraid or not warm” to the veteran.

“Complicated reintegration” is the best phrase to describe the process of normal reintegration interrupted by psychiatric difficulties. This research has been confirmed with a newer cohort of 106 married OEF/OIF veterans. It is clear that family involvement in treatment of mental health disorders is very important. This research, however, only studied the veteran clinical population cross-sectionally, and as such, is not reflective of overall post-deployment rates of psychiatric disturbance. Looking forward, questions remain around the normal developmental processes in family reintegration, around the impact of training-related, combat behavior on the family, in absence of PTSD or depression (i.e., BATTLEMIND behavior), and around couple- or family-level resilience.



### ***POSTTRAUMATIC STRESS DISORDER AND INTIMATE PARTNER VIOLENCE PERPETRATION***

*Dr. April Gerlock, PhD, ARNP,  
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Outpatient Clinic, Puget Sound  
Veterans Affairs; University Of  
Washington School Of Nursing*

- Researchers analyzed the extent of Intimate Partner Violence or (IPV) assessment
- Results indicated that in 71% of cases there was no documentation of IPV assessment
- Data highlight the prevalence of IPV perpetration in PTSD treatment-seeking male veterans
- 27% of men admitted being violent with their wives; over 30% of veterans said they had been violent previously



Intimate Partner Violence or (IPV) is a pattern of coercive and assaultive behaviors in an intimate relationship, including behaviors that are physically or sexually assaultive, as well as psychologically abusive. This can include behaviors that are illegal as well as legal. To learn more, researchers embarked on the federally funded study, “Relationships and PTSD: Detection of Intimate Partner Violence” (IPV). For phase 1, 10% of the all male veterans involved in PTSD treatment at the VA Puget Sound Health Care System treatment sites were selected randomly for a 5-year record review. This accounted for 507 patients and approximately 75,000 electronic progress notes. These veterans were in heterosexual relationships for at least one year, and had partners who agreed to participate in the study.

While reviewing the progress notes, the researchers analyzed the extent of IPV assessment. Four study questions were established. 1) Is IPV perpetration being assessed and documented in the veteran’s record? 2) If so, who is assessing? Where are the assessments taking place? When does the assessment occur? And, how is IPV perpetration determined? 3) How does health care access differ when IPV perpetration is present and identified? And 4) how does documentation of IPV impact detection of IPV perpetration?

The results indicated that in 71% of cases there was no documentation of IPV assessment. In 5% there was vague documentation. In 24% of cases IPV perpetration was assessed, and of these cases, 39% did not show IPV perpetration, while 61% did. The researchers were unable to identify any drivers of IPV assessment documentation. There was a clear difference in healthcare access among no documentation and documentation groups, as well as no IPV and IPV perpetration groups. When a patient was asked about IPV, there was a ripple effect experienced across the medical center, resulting in multiple assessments.

In order to better understand the differences between these groups, Phase 2 involved face-to-face interviews with a random selection of 125 male, heterosexual veterans in PTSD treatment. In interviews with the veteran and his wife, about 45% said they experienced IPV, and 55% said they did not experience IPV. 27% of men admitted to being violent with their wives and over 30% of veterans said they had been violent previously. The reports from the veterans were consistent with what the wives reported. A number of the veterans in the study reported having their relationships end post deployment with most of the break ups occurring at the 2 year mark. The rate of break up from 2 to 4 years was the highest. PTSD treatment for the veterans in Phase 2 ranged from 5 months to 36 years. Most of the veterans did serve in a war zone.

These data highlight the prevalence of IPV perpetration in PTSD treatment-seeking male veterans, the magnitude of health care utilization by these veterans, in addition to the impact of war zone deployment on relationships and relationship break-ups. Given the prevalence of IPV in PTSD treatment-seeking veterans, persons caring for active duty military and military veterans should know how to screen for both IPV perpetration and victimization, and understand the difference between PTSD, post-deployment readjustment, and IPV. When IPV victimization or perpetration is identified, it takes both provider-level, and system-level understanding and response to create a safety net for military families. Families need education about post-deployment readjustment, but it is the service member's responsibility to stop all abusive and violent behavior.

### ***SOLDIER MENTAL HEALTH AND FAMILY FUNCTIONING AMONG NATIONAL GUARD SOLDIERS***

*Dr. Christopher R. Erbes, PhD, LP, Posttraumatic Stress Recovery Program, Minneapolis Veterans Affairs Medical Center*

*Dr. Melissa A. Polusny, PhD, LP, Posttraumatic Stress Recovery Program, Minneapolis Veterans Affairs Medical Center; Center For Chronic Disease Outcome Research; Department of Psychiatry, University of Minnesota*

- VA and National Guard developed Readiness and Resilience in National Guard Soldiers (RINGS) project to examine the effects of post-deployment mental health on family functioning
- Also designed to identify protective and vulnerability factors in soldier mental health in National Guard troops following combat deployments
- Data showed positive correlation between PTSD and marital relationship distress; “numbing” cluster of symptoms most strongly related to relationship distress
- For children, successful parenting adjustment included positive parenting, positive child relationships, consistent







- discipline, and effective supervision
- Across the board, partners reported communication important to ensure that the soldier was active in the family

Military families serve a key role in the resilience of service members as they deal with the stressors of deployment to, and re-deployment from, combat operations. At the same time, military families face their own stresses around combat deployments. Often, the psychiatric distress of soldiers, including particularly PTSD, may have an impact on military family members as well. In addition, OEF/OIF have increasingly relied on large deployments of National Guard troops. However, National Guard troops and their families face unique stressors, but remain understudied.

Together, the VA and National Guard developed the RINGS project to examine the effects of post-deployment mental health on family functioning. RINGS aims to identify protective and vulnerability factors (risk and resilience) for soldier mental health in National Guard troops following combat deployments. The RINGS project involved three cohorts of National Guard service members, a RINGS longitudinal cohort study, an in-theater screening and follow-up study, and a couples and PTSD study.

The RINGS Longitudinal Cohort Study aimed to identify psychosocial risk and resilience factors associated with post-deployment mental health, health care utilization, and military attrition. It also aimed to examine rates of relationship distress and investigate associations between PTSD and intimate partner relationship functioning. The methodology of this cohort was designed around a prospective, 4-wave study of 522 OIF deployed National Guard soldiers, followed by data collection surveying using self-report symptom and relationship measures and post-deployment clinical interviews with a subset of 348 veterans. Data from this first cohort of 348 soldiers demonstrate the rates of relationship distress and the relationship between psychiatric diagnosis and quantitative indices of relationship functioning as reported by soldiers.

In the RINGS Longitudinal Cohort Study, at 3 to 6 months post-deployment, 16% screened positive for PTSD, and 22% of those with partners screened positive for relationship distress. The data showed a positive correlation between PTSD and relationship distress ( $r = .32$ ; Meis et al., in revision). Additionally, the “numbing” cluster of symptoms was most strongly related to relationship distress (Erbes et al., in revision). Regarding family relationships and soldier resilience, regression analyses found that pre-deployment worry around family and life disruption was predictive of PTSD symptoms post-deployment. The implication is that families can serve as a source of support, or a source of strain, for soldiers in the face of combat deployment.

The second cohort was an in-theater screening and follow up study aiming to determine the scope of mTBI/PTSD comorbidity and examine impact on psychosocial functioning across domains. At the same time, it was designed to examine the effect of growth in PTSD symptoms and couple functioning on OIF veterans' parenting practices. The methodology of this cohort study was designed around a two-wave, quantitative study of 2,677 OIF deployed National Guard soldiers assessed in-theater and followed up one year post-deployment ( $n = 516$  parents). Data were collected using self-report symptom, relationship functioning, and parenting measures. The data indicated relationships between self-reported symptoms of PTSD, couple functioning, and parenting difficulties.

The third cohort was the couples and PTSD group. Here, the researchers aimed to examine the effect of level of couple functioning on course of PTSD symptoms, as well as the reverse--the effect of PTSD symptoms on couple functioning over time. The methodology of this cohort study was designed around a two-wave, mixed method study of 49 OIF National Guard veterans and their spouses. Data were collected using self-report symptom and relationship measures, clinical interviews, and videotaped



observation of couple interactions. The data provided qualitative information from a partner perspective of the experience of living with a returning soldier who is suffering from PTSD.

The data from this cohort indicated that successful parenting adjustment included positive parenting, positive child relationships, consistent discipline, and effective supervision. Emergence of PTSD at or before the first year after reunion predicts the level of dyadic functioning as well as parenting. Additionally, social support in-theater plays a small but significant protective factor for PTSD and parenting. Within this cohort, 7 of 49 soldiers (14%) were diagnosed with PTSD. Unsurprisingly, partners of soldiers with PTSD reported less marital satisfaction than partners of soldiers without PTSD ( $p < .10$ ). PTSD numbing symptoms were reported by both soldiers and partners. Soldiers reported lower levels of intimacy (sexual, recreational, and positive interactions), lower couple satisfaction, increased frequency of coercive and destructive communication, and decreased mutual communication. Partners reported lower levels of intimacy (emotional, social, and recreational) and less frequent mutual communication.

Over the course of these studies, several themes emerged. Partners reported that communication was important in order to ensure that the soldier was active in the family. At the same time, partners reported that they were careful about what they told the soldiers in order to shelter them from worries. Many partners reported feeling “adrift;” they felt like they were alone facing the challenges of their spouse’s deployment. Partners consistently communicated a desire for increased support, either by living closer to a base or military facility, or even additional information communicated about their spouse while in theatre. They also felt that formal support ended when soldiers returned.

This research adds to the understanding of families and the essential role they play in supporting soldiers as they deal with the stressors of deployment. The research also highlights the fact that family members are also affected by deployment stressors and the soldier’s mental health upon their return. Unsurprisingly, the data also show that rates of relationship distress are elevated in National Guard soldiers following deployment and that PTSD is associated with greater relationships distress and parenting difficulties. Looking forward, identifying ways to support and bolster partner and family functioning throughout a deployment cycle should be a key priority for enhancing soldier resilience.

### ***SPECIAL CONSIDERATIONS FOR WOMEN VETERANS WITH COMORBIDITIES***

*Dr. Rachel Kimerling, PhD, Veterans Affairs Palo Alto Health Care System; The Clinical Laboratory and Education Division, National Center For PTSD*

- Women make up 20% of new recruits and 14% of total DoD forces, and VA expects 17% rise in female veteran population by 2033
- Role strain quite significant for women, must often integrate and balance multiple roles-- service member and indispensable family member
- IPV also concern, 30-44% of active duty women and 39% of women veterans report lifetime history of IPV
- Childcare is also a major stressor of women in the military



Women are playing an increasingly large role in the Armed Forces. Today, women make up 20% of new recruits and 14% of total DoD forces, and the VA expects to see a 17% rise in the female veteran population by 2033. There are a wide range of unique issues related to women in the active duty military. Deployments are associated with gender-specific stressors and family and relationship concerns. Women must often integrate and balance multiple roles, service member and indispensable family member. Role strain can be quite significant for women. Social role expectations may contribute to the challenges women face in balancing the multiple roles of wives, mothers, and service members.

When it comes to family and marital status, women in the armed forces are less likely to be married, but in cases where they are, marriages are more likely to be dual-military marriages, further exacerbating the strain of service on the family. In these families, children are frequently left with other caregivers as both parents are deployed. Women service members are also substantially more likely than men to be single parents with sole care giving responsibility, and report more unmet childcare needs. Rates of marital dissolution are higher among women than men. Being female and in the military is a consistent predictor of marital dissolution. Children reduce the risk of divorce, but the protective effect is less for women than men. Army, Navy, and Marine service reduces the risk of dissolution during deployment, however Air Force service increases the risk. In both cases, the risk is worse for women than men.

Intimate partner violence (IPV) is also a major concern for women serving in the military. Data show that enlisted women at higher risk. 30-44% of active duty women report adult lifetime history of IPV, with 21.6% reporting IPV during service. Comparably, 39% of women veterans report a lifetime history of IPV. In addition to IPV, sexually harassment and assault is a common challenge for women in the military. It is important for clinicians to understand that, for women, the “trauma hypothesis” is not limited to combat exposure. It also includes sexual assault.

Needless to say, childcare is also a major stressor of women in the military. Women report greater childcare problems than men, and military mothers more likely than fathers to miss work due to childcare. During post-deployment adjustment, returning mothers exhibit higher rates of depression and family functioning challenges than women without children.

In order to better serve women in the military, a better understanding of role conflict should be used to develop interventions that set appropriate expectations for women and their families. Women themselves should also be helped to understand expectations, as they are naturally inclined to want to fulfil family and service roles thoroughly. Likewise, facilitating spousal support and peer support is strongly linked to women’s marital satisfaction.

### ***APPROACHES TO ENHANCING RESILIENCE AMONG MILITARY COUPLES***

*Dr. William Saltzman, PhD, National Center For PTSD, Veterans Affairs Palo Alto Health Care System; Families OverComing Under Stress (FOCUS), UCLA Semel Institute for Neuroscience And Human Behavior; California State University*

- FOCUS provides support to military families facing multiple-deployment stress and physically or psychologically-injured service member



- Results indicate combat exposure clearly increases risk for family strife, divorce
- FOCUS identified several sources of resilience in couples, chief among them the understanding around the physiology and psychology of war traumas
- FOCUS Resiliency Training uses lessons learned, trauma-informed education regarding deployment, combat, and operational stress

The FOCUS Project for Military Families provides support to families coping with challenges of multiple-deployment stress and physically or psychologically-injured service member. FOCUS provides resiliency training through skill-building groups for parents, teens, and children; multi-session family resiliency training for military families with children at family-convenient hours; services tailored to individual family strengths and risks; and community level workshops and consultation. FOCUS is not therapy, but a skilled-based approach to overcome hurdles that make it difficult for military families to seek help. FOCUS is available at 14 sites worldwide. It is also being adapted for couples based services.

The traditional deployment cycle of pre-deployment, deployment, and then post-deployment is increasingly irrelevant. With today's OEF/OIF multiple deployments, time between deployments is too short for the families to reconstitute and re-establish their relationships. Studies are showing that there is an accumulation of stress and worry during the time between deployments, and it frequently filters down to children.

A recent study, published by Benjamin Karney (2007) based on FOCUS results, indicates that combat exposure clearly increases risk for family strife, including divorce. The stresses of military deployments have significant negative impact to individuals and couples alike. Likewise, the focus on dissolution may mask significant impacts on military families. There is a clear need to research the drivers of resilience in couples and family relationships.



Researchers working on the FOCUS project have identified several sources of resilience in couples. The first is availability of knowledge and understanding around the physiology and psychology of war traumas. A strong understanding and accurate expectations of the perils of deployment can improve resiliency. In families with children, the same is true for proper expectations for children's adjustment. Additionally, shared beliefs helps establish a common platform to develop a sense of coherence and of mission. It helps families adopt a team approach to help them work through challenges together. Likewise, structure and routine help families. Having proper expectations is important to reduce anxiety, but families should be able to be flexible and adapt to change. Needless to say, communication is always essential. Military families tend to get "siloed" and family counselors need to foster a culture of openness and expression. Moreover, families should be encouraged to develop core relational skills.



These help military families regulate their emotions, balancing expression and management. Lastly, the ability to collaboratively develop concrete goals is reassuring to a stressed family.

The FOCUS Resiliency Training deploys these lessons through trauma-informed education outlining the impact of deployment, combat, and operational stress. The Training develops marital resilience skills through goal-setting, communication, emotional regulation, and problem-solving. It also builds on narrative timeline activities in order to help couples appreciate differences and develop a shared narrative and mission. The training also includes other activities to build coping, cohesion, and support skills. Likewise, the Sharing the Narratives: Enhancing Marital Resilience component is designed to help couples make meaning out of adversity. In doing so, they can work towards normalizing distress. It helps couples clarify confusion and misunderstandings, as well promote perspective taking and shared understanding. The program encourages couples to support the expression of individual experiences. Couples are also counseled around increasing the quality and frequency of positive interactions and family-level problem solving and goal setting. Lastly, the adapted FOCUS Skill Building for Couples works on improving emotional regulation, goal setting, problem solving, communication skills, and management of deployment stress and combat stress reminders.

### ***TRAUMA-INFORMED PERSONAL EMPOWERMENT PROGRAMS FOR FAMILIES***

*Dr. Julian Ford, PhD, Department of Psychiatry, University of Connecticut School of Medicine*

- Trauma-Informed Personal Empowerment Programs (TIPEP) provide evidence-based psychoeducation and training to promote resilience in families managing PH/TBI
- 3 evidence-based TIPEP models: Seeking Safety, Trauma Recovery and Empowerment Model (TREM), and Trauma Affect Regulation: Guide for Education and Therapy (TARGET)
- Increases families' knowledge and empowerment by explaining trauma, resilience, and recovery

Translation of research around the effects and management of physical and psychological war trauma is one of the top challenges facing the military and veteran health community. Families are continually left unsatisfied with a simple PTSD diagnosis, and they need support understanding mechanisms, implications, and support strategies. Empowerment through knowledge is what families and military personnel need. They need to understand what has changed with their loved one and what they can do about it. There are many skills that families need help learning in order to cope with stress and inhibit aggressive behavior. Making matters more difficult, families also require presence of mind and composure in order to overcome the challenges.





To meet this need, TIPEP provide evidence-based education on the nature and impact of psychological trauma and teach skills that promote resilience for families who are challenged by direct or vicarious exposure to psychological trauma. TIPEP has been shown to produce outcomes, helping families enhance communication, safety, growth, involvement, and connectedness. The collaborative approach offered by TIPEP is described using the acronym, ASK US: Affirmation of strengths and connections, Skills for communication and achievement, Knowledge about trauma and resilience, Understanding of the challenge of recovery, and Solutions that highlight a path to success. TIPEPs are developed in collaboration with families and military personnel who have real-world experience, scientists who research evidence-informed practices, and clinician educators who develop skilful applications.



There are three evidence-based TIPEP models, 1) Seeking Safety ([www.seekingsaftey.org](http://www.seekingsaftey.org)), 2) TREM ([www.communityconnectionsdc.org](http://www.communityconnectionsdc.org)), and 3) TARGET ([www.advancedtrauma.com](http://www.advancedtrauma.com)).

TIPEP increases military families' knowledge by explaining trauma, resilience, and recovery in new ways that are empowering. Years of research have uncovered much of how PTSD operates in the brain. Thus far, three major focal areas have been identified as being affected by stress and traumatic stress. The first is the “alarm in the brain” or the amygdala. Those suffering from PTSD are often jumpy, and they behave as if they have a very intense alarm that is going off in their brain. The second area of the brain that is impacted is the “filing center” or hippocampus. This part of the brain is responsible for memory and context and seems to be down regulated in patients with PTSD, resulting in diminished memory function. Third, there is the “thinking center” or prefrontal cortex, responsible for high level thought and cognition. However, it is unable to operate properly as the amygdala is hyperactivated and activity in the hippocampus is reduced.

TIPEP enhances military families' skills by enabling all family members to handle (alarm) reactions consistent with their values, goals, and mutual respect. TIPEP teaches “SOS: 3 Steps to Focusing” in order to assist with this process. First step 1, slow down and sweep the mind completely clear. Step 2, reorient and focus on just a single, voluntary thought. Finally, step 3, self-check stress levels and personal control levels using a 1 to 10 scale.

Likewise, TIPEP enhances military families' strengths by validating families' and military personnel's courageous and resilient pursuit of FREEDOM. FREEDOM is an acronym for a seven-step coping process—Focus, Recognize, Emotion, Evaluate, Define, Options, and Make a contribution.

The implication of the work developing TIPEP is that for clinicians, one TIPEP model should be in every clinician's tool kit, for researchers, studies of TIPEP's efficacy with military families should be established (beginning in January 2010, TARGET vs. PE will be studied), and for policymakers, every military family should receive TIPEP educational materials and have access to TIPEP services.

### ***THE REACH PROGRAM: A MULTI-FAMILY GROUP PSYCHOEDUCATIONAL INTERVENTION FOR PTSD***

*Dr. Ellen Fischer, PhD, Health Services Research & Development Service, Arkansas Department of Veterans Affairs; Department of Psychiatry and Epidemiology, University of Arkansas For Medical Sciences*

*Dr. Michelle D. Sherman, PhD, Family Mental Health Program, Oklahoma City Veterans Affairs Medical Center; South Central Mental Illness Research, Education and Clinical Center; University of Oklahoma Health Sciences Center*

- OEF/OIF veterans struggling with family and marital health
- Partners of PTSD veterans exhibit caregiver burden and overall psychiatric stress
- FPE presents an evidence-based intervention opportunity
- Oklahoma City VA Medical Center modified Multifamily Group Model for VA PTSD treatment, named REACH Program
- 3 phases--1) 4 weekly single family sessions, 2) 6 weekly multi-family classes, 3) 6 monthly multi-family group sessions
- Data show REACH is a feasible, well-received family intervention for combat trauma

Recent data paint an increasingly grim picture of family and marital health in OEF/OIF veteran populations. For example, about 75% of married or cohabiting veterans referred for mental health evaluation at the Philadelphia VA reported "some family problem" within the past week. Likewise, 86% of veterans in a VA PTSD outpatient program report that PTSD is a source of family stress. The Mental Health Advisory Team (MHAT 6) report published in Nov 2009 indicated that in the veteran population marital problems are increasing every year since the first survey in 2004. It also reported that 16% of soldiers surveyed plan to divorce or separate from their partners. Additionally, the report uncovered higher rates of mental health disorders among soldiers with multiple deployments.

Data on the partners of military service members is also depressing. Partners of veterans with PTSD experience exhibit high levels of caregiver burden and high levels of overall psychiatric stress. Compared to partners of veterans without PTSD, they report lower relationship satisfaction and poorer psychological adjustment. While there is a great deal of suffering within the veteran population, there is also hope. 79% of veterans express interest in greater



family involvement in their outpatient VA PTSD programs. Over 75% of live-in female partners of veterans with PTSD indicated that couples and family therapy is very important in coping with PTSD in the family. Additionally, conjoint treatment has been found to be effective with other disorders (depression, substance abuse, schizophrenia).

Adapting FPE presents an evidence-based intervention opportunity with the veteran population. FPE was originally developed as manualized, 9-month interventions for schizophrenia, schizoaffective disorder, and bipolar illness. The goal of FPE is to equip families with the skills known to reduce relapse and improve quality of life, with an emphasis on careful assessment of patient and family history and functioning, education about the illness, and problem-solving. The research base for FPE is vast. Meta-analyses have concluded that benefits of FPE for schizophrenia (when added to standard pharmacotherapy) include reduced risk of relapse, remission of residual psychotic symptoms, enhanced social & family functioning, and financial savings. Notably, these findings are robust across cultures, and they are sustainable across time.

To this end, the Oklahoma City VA Medical Center modified an evidence-based model of FPE, the Multifamily Group Model (McFarlane, 2002), to tailor it to delivery in a VA setting and to veterans living with PTSD and their family members. Named the REACH Program (Reaching out to Educate and Assist Caring, Healthy Families), the three-phase program begins with Phase I, a four weekly “joining sessions” with the individual veteran and his/her family focused on rapport building, assessment, and goal setting. Phase II consists of six weekly diagnosis-specific educational/support sessions for cohorts of 4 to 6 veterans and their families. In Phase III, veterans and families attend six monthly multi-family groups to support the maintenance of gains.



Since 2006, 20 cohorts of veterans with PTSD and their families have participated in REACH; program retention rates and levels of satisfaction are quite high. Veterans and families who choose to also participate in the REACH evaluation study complete a battery of self-report measures at four time periods across the nine-month intervention. Preliminary pre-post change data indicate improved knowledge of PTSD and increases in perceived ability to cope with PTSD among both veterans and family members; an enhanced sense of social support among veterans; and improved problem-solving skills and empowerment on the part of family members.

Procedurally, REACH worked with a variety programs in order to facilitate easy referral of at-risk veterans into REACH. Common referral sources are PTSD programs, ambulatory MH clinics, inpatient psychiatric units, MH intensive case managers, primary care mental health, and day-treatment programs. Additionally, “on-call” REACH psychologists meet with interested veterans immediately after his/her scheduled psychiatric appointment in order to connect with all potential at-risk veterans. In order



to screen and encourage veterans into REACH, engagement sessions are conducted with a warm, motivational, "guest in our home" mindset. Support staff emphasizes helping veterans achieve their goals and clearly describe the structure of the REACH program. In order to take a soft touch, veterans are offered the opportunity to schedule their first REACH session or an informal follow-up phone call with the support staff. From July 2006 to October 2009, REACH has conducted engagement sessions with 378 unique veterans living with PTSD, of which 213 (56%) unique veteran-family dyads have gone on to participate in the REACH clinical program.

The REACH clinical program is comprised of three phases 1) four weekly 45-minute single family sessions, 2) six weekly 90-minute multi-family classes, and 3) six monthly 90-minute multi-family groups. During Phase 1, REACH clinicians work to build rapport; assess precipitants and prodromal signs; begin to address coping strategies, define goals for this family; assess social history, family resources, support network; and identify family strengths. In Phase 2, two psychologists work with about four to eight families working to psychoeducate them about PTSD and its impact; communication, problem-solving, and coping skills; and relationship enhancement. In Phase 3, clinicians present didactic and interactive presentations on topics covered in the program in order to help facilitate sharing, discussion, and problem-solving exercises.



Thus far, patients have remained highly committed to REACH, with enrolment-to-completion ratios of about 85% in each phase; however, only 48% of patients have enrolled and completed all three phases. Upwards of 95% of participants consent to REACH evaluation, a self-report battery conducted prior to REACH for baseline and following the end of each phase. The data show that 90% of family participants are the veterans' spouses, followed by 5% parent, 3% sibling, and 2% child. Evaluations have shown significant effect sizes, ranging from 0.47 to 0.80, around veterans' PTSD knowledge. In family, effect size ranged from 0.32 to 0.52. Empowerment effect size was limited among veterans at 0.06 but significant among family at 0.54. Likewise, the data show improvement in interpersonal relationships, with effect sizes ranging from 0.15 to 0.36 in veterans and 0.19 to 0.31 in family. Additionally, symptom severity improved in veterans, with 0.31 effect size on global symptom index measures and 0.41 on depression measures. Moreover, evaluations showed increases in perceived ability to cope. They also indicated that empowerment correlates with improvements in interpersonal relationships. REACH also received "very satisfied" or "mostly satisfied" satisfaction scores from 95% of veterans and family members. They would recommend REACH to others with similar needs.

This research shows that REACH is a feasible, well-received family intervention for combat trauma. It is an additional tool for clinicians at other VA medical centers. REACH program directors are now assessing potential modifications to appeal specifically to OEF/OIF veterans, as well potential changes for delivery of family services in CBOCs by mid-level practitioners. Question remain about the appropriate delivery model for the military setting, what is the feasibility and acceptability of such a program, would it need to be shorter, and who would be best to offer REACH, e.g. military chaplains, family counsellors, and mental health staff?



### COGNITIVE-BEHAVIORAL CONJOINT THERAPY FOR PTSD

*Dr. Candice M. Monson, PhD, Department of Clinical Training, Women's Health Sciences, Ryerson University; National Center For PTSD, Department of Veterans Affairs*

- CBCT for PTSD is disorder-specific conjoint therapy designed to decrease PTSD symptoms, improve relationship functioning, and enhance the well-being of significant others
- Involves fifteen trauma-focused 1.25-hour manualized sessions
- Results show improvements in clinician ratings, self-reports, and partner reports of partners' PTSD symptoms

Cognitive-Behavioral Conjoint Therapy (CBCT) for PTSD is a disorder-specific conjoint therapy designed to simultaneously decrease PTSD symptoms, improve relationship functioning, and enhance the well-being of significant others.

Utilizing CBCT for PTSD is driven by five reasons. First, the evidence suggests that the therapy can produce three results for generic behavioral couple's therapy for PTSD, for generic behavioral family therapy for PTSD (Glynn et al., 1999), and for disorder-specific therapy for PTSD (Monson et al., 2004; 2005). Second, unlike CBCT, a negative family environment is associated with a worse outcome in individual treatments (Tarrier et al., 1999). Third, data do not support existing therapies improving intimate relationship functioning (Monson et al., 2006; Galovski et al., 2005). Fourth, drop out, non-response, and partial response to existing evidence-based therapies is a significant challenge (Bradley et al., 2005; Hembree et al., 2003). And fifth, PTSD is highly associated with relationship problems (Whisman, 2000; Nelson Goff et al., 2006).



CBCT for PTSD is a disorder-specific intervention. It is trauma-focused, but not imaginal exposure-based. It involves fifteen 1.25-hour manualized sessions. It utilizes customary inclusion and exclusion criteria for PTSD-identified partner, including no PTSD diagnosis for the partner. Exclusionary criteria based on the relationship are current, severe violence and only minimal commitment. CBCT for PTSD is broken into three stages. Stage 1 is introduction, psychoeducation, and safety Building. Stage 2 is relationship enhancement and undermining avoidance. And stage 3 is dyadic cognitive restructuring. Outcomes are measured using Clinician Administered PTSD Scale (CAPS), PTSD Checklist (PCL) for both the patient and the partner, Dyadic Adjustment Scale (DAS), and Beck Depression Inventory (BDI).

Results from an uncontrolled trial of the therapy with seven community couples including a partner with PTSD show a statistically significant and large improvements in clinician ratings, self-reports, and

partner reports of the identified partners' PTSD symptoms ( $d = 1.35-1.69$ ). Partners also reported statistically significant and large improvements in their relationship satisfaction ( $d = 1.41$ ).

Going forward, CBCT for PTSD should be evaluated head-to-head with other interventions. Its efficacy with dually traumatized PTSD couples should also be investigated. Research into relationship satisfaction as a moderating factor should also be understood. Finally, alternate modes of delivery, couple instead of conjoint and modular, should be evaluated.

### ***COUPLES THERAPY FOR ALCOHOL USE DISORDERS AND PTSD***

*Dr. Jeremiah Schumm, PhD, PTSD and Anxiety Disorders Division, Cincinnati Veterans Affairs Medical Center*

- Co-occurrence of PTSD and alcohol use disorders (AUD) is common among veterans
- Few integrated treatments developed targeting both disorders
- Couples treatment for AUD and PTSD more effective than individual treatment
- Researchers at the Cincinnati VA developed CTAP, integrated couples therapy for PTSD and AUD
- Manualized, cognitive-behavioral treatment
- Couples share the responsibility for recovery

Co-occurrence of PTSD and AUD is shown to be as high as 73% among veterans, namely male combat Vietnam veterans with PTSD (Kulka et al., 1990). Among OIF veterans, data show that 17 to 25% exhibit PTSD and 12 to 15% AUD (Milliken, Auchterlone, & Hoge, 2007). This co-occurrence is associated with worse work productivity, more physical health problems, and higher health care utilization costs versus having PTSD only or neither disorder (Hoge et al., 2007). In addition, these disorders are associated with lower partner relationship adjustment and higher partner violence (Marshall, 2003; Goff et al., 2007).

Despite the high co-occurrence between alcohol use disorder and PTSD, few integrated treatments have been developed that target both disorders. In fact, PTSD treatment outcomes are worse following separate and sequential AUD treatment (Brown, Stout, & Mueller, 1999; Ouimette, Finney, & Moos, 1999). In this model AUD is treated first, leading to relapse of AUD during PTSD treatment as patients attempt to self-medicate themselves. In addition, there are no published couples-based protocols for addressing these two disorders together, despite their negative impact on veterans' partners. It is clear that AUD and PTSD treatments should be integrated and couples-based.



Research into behavioral couples treatment for AUD and PTSD has shown it to be more effective than individual and twelve-step treatment. As social support is one of the largest predictors for PTSD recovery, there may be benefits to couple-based treatments for PTSD. To this end, researchers at the Cincinnati VA developed Couples Treatment for Alcohol Use Disorders and PTSD (CTAP). CTAP is a manualized, cognitive-behavioral treatment in which couples share the responsibility for recovery. The program is made up of four-stages, 1) stop alcohol use and promote safety, 2) improve relationship and reduce PTSD avoidance, 3) reduce 'stuck' thinking patterns, and 4) develop a continuing recovery plan.

The implications for clinicians are that they can work directly with partners to stop enabling, and they can promote understanding of AUD and PTSD. For researchers, CTAP presents an opportunity for the development and testing of trans-diagnostic, integrated protocols that are systems-based. Finally for policy makers, CTAP's success would require policy support that encourages spousal collaboration from program admission.

### **STRUCTURED APPROACH THERAPY FOR PTSD IN OEF/OIF VETERANS**

*Dr. Frederic Sautter, PhD, Family Mental Health Program, Southeast Louisiana Veterans Health Care System; South Central MIRECC; Department Of Psychiatry, Tulane University*

- Strategic Approach Therapy (SAT) is new evidence-based couple's interventions for PTSD in OEF/OIF veterans
- Manualized, 12-session behavioral PTSD treatment
- Adapts exposure concepts to couples therapy to decrease trauma-related anxiety and to allow couples to process deployment experiences
- Preliminary results show reductions in self-reported, clinician-rated, and partner-rated PTSD symptoms

Evidence-based couple's interventions for PTSD are limited. Researchers at the Southeast Louisiana VA have developed a novel, couple-based treatment, named SAT, to reduce PTSD in OEF/OIF veterans. While couple-based, SAT is for the treatment of PTSD, not for the treatment of marital or relationship problems. As such, highly functional couples are more likely to show benefits. SAT is designed to be administered by clinicians with experience with both couples therapy and PTSD treatment. The objectives of the SAT program are to adapt exposure concepts to couples therapy in order to decrease trauma-related anxiety and in order to allow couples to process deployment experiences. SAT aspires to assist couples increase intimacy and positive emotions and decrease emotional numbing.

This manualized, 12-session behavioral PTSD treatment is designed to provide OEF/OIF couples with empathic communication skills to facilitate the







processing of deployment-related trauma, and exposure-based interventions to reduce trauma-related anxiety. The approach involves first developing understanding around normalizing trauma and the impact on the veteran and the relationship. Second, SAT focuses on encouraging empathetic communication so that the couple may talk about deployment, learn to listen empathetically, and create safety for couple soothing. Next, during the exposure based sessions, the couple works together to support the veteran as the veteran identifies events that occurred during deployment that induced thoughts of fear. This allows the couple to process memories together, confront avoidance, and learn to support each other. Finally, SAT attempts to develop acceptance, so that couples may accept differences their differences, embrace their strengths, and accept challenges together. Other intervention components target emotional numbing by providing training in emotional expressiveness and emotion regulation.

Initial data will from two quasi-experimental investigations of SAT is promising. The first study showed significant reductions in self-reported ( $t=6.72$ ;  $p<.001$ ), clinician-rated ( $t=4.69$ ;  $p<.002$ ), and partner-rated ( $t=3.66$ ;  $p<.01$ ) PTSD symptom severity in a sample of six veterans. The second study, conducted with six OEF/OIF veterans and their spouses, showed significant reductions in overall PTSD severity in both self-reported PTSD symptoms ( $t=3.7$ ,  $p<.01$ ) and clinician-rated symptoms ( $t=4.86$ ,  $p<.002$ ). Data from these two studies suggest that SAT offers promise as an effective treatment for PTSD in OEF/OIF veterans. A randomized trial is currently underway.



## KEY TAKEAWAYS

Several key themes emerged from the conference:

- Health and well being of service members and their families is inter-related
- Combat exposures, rather than deployment itself, significantly affect onset of mental health symptoms, problem alcohol drinking, and cigarette smoking post-deployment
- Multitude of VA Caregiver Support Services exist including number of pilot programs; VA has identified research needs related to family functioning
- Many lessons learned including multi-modality approach, effectiveness of technology-based interventions, and need for services along the short and long-term trajectory of care
- Women represent the fastest growing segment of new VA users and 60% are under the age of 45; More than 30,000 single mothers have deployed to Iraq and Afghanistan
- At-risk children with deployed parents include: older teens, girls, longer deployments, and those with non-deployed parent with poorer mental health
- Increased connectivity via multiple communication platforms is both helpful and challenging for children and families
- 1.1 million men and women make up the reserve forces; Unique stressors include family, civilian employment, and reserve employment; Additional research needed within the reserve component
- By 2012, data collected from the Millennium Cohort Family Study will provide strategic information for DoD leadership to inform health policies for service members and their families

## SESSION SLIDES

The slides for these presentations are available in electronic PDF format at the DCoE website <http://www.dcoe.health.mil/Training/PastConferences.aspx>.

## NEXT YEAR

The next Trauma Spectrum Disorders conference will be held on December 7-8, 2010 in Bethesda, MD. Please see the Save the Date notice on the following page.



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